

HoltraChem... PUTTING QUALITY FIRST

Specifications, Price, Availability, On-time Delivery are a given at HoltraChem for:

Caustic Soda
Caustic Potash

Hydrogen Peroxide
Titanium Dioxide
(Anatase Slurry)

HoltraChem also provides:

- Consistency in Professional Sales, Transportation and Customer Service.
- Appreciation for the constraints of our customers' schedules and the need to improve competitive position by cost reductions.
- A quarterly Caustic Soda review, prepared by well informed staff with multi consumer, producer and economist contacts affecting our customer's long and short term profit making decisions.

HoltraChem is committed to a quality program of 100% **CUSTOMER SATISFACTION**.

Putting QUALITY First,
puts you first.

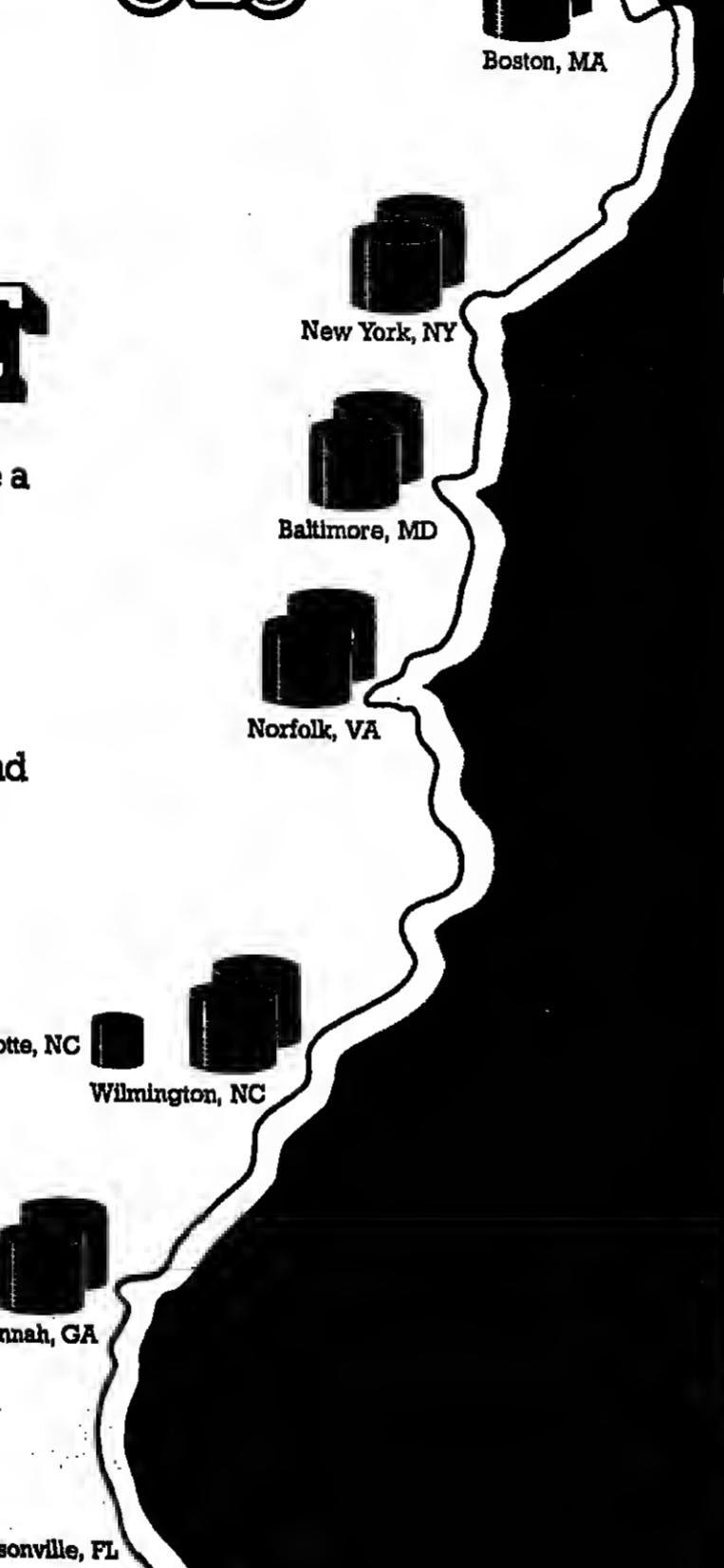
Call toll free:
800-343-6470



HoltraChem, Inc.

199 Bedell Lane
Natick, MA 01760-5197
Telephone (617) 655-3310
Telex WU 918456
Cable: HOLTRACHEM

Atlanta, GA (404) 971-7721
Baltimore, MD (301) 941-3769
Charlotte, NC (704) 522-3774
Clifton, NJ (201) 778-7771
Pennsauken, NJ (609) 664-3113
Richmond, VA (604) 921-5152



New Orleans, LA

Bayer, Hoechst Preview 'the K'

Kunststoffe '86, the week-long, international plastics and rubber trade show at Dusseldorf in West Germany isn't scheduled to officially open its doors until November 6, but the "Big Three" German chemical producers have their plans for the triennial event pretty well firmied up.

Bayer AG and Hoechst AG have already outlined their progress since K '83 at press previews in Leverkusen and Frankfurt and given trade press editors a taste of what lies ahead. Next week, BASF AG will unveil its new polymer products and applications at a similar event in Ludwigshafen.

Bayer chairman of the board of management, Hermann J. Strenger, told reporters gathered at the company's Leverkusen headquarters that in the company's view high-performance plastics have the best market prospects for the future.

In 1990, for example, Bayer expects world consump-

tion of engineering thermoplastics to reach 4.7 million metric tons, up from 4.2 million last year, while consumption of polyurethanes is projected to grow to 4.5 million tons from 3.6 million during the period.

Dr. Kurt Weirauch, head of application technology for Bayer's plastic group, agrees that engineering thermoplastics have taken on special importance for Bayer as well as for the industry. The company now offers eight different engineering thermoplastics in a total of more than 200 grades.

Dr. Weirauch says consumption of engineering thermoplastics in Europe alone totaled 1.2 million tons last

Continued on Page 33

The first large bridge to be reinforced with 'Polystal,' a high tensile strength glass fiber composite made by Bayer AG, was opened to traffic in July in Dusseldorf. The material boasts lower elastic modulus than tensioned steel, is highly elastic and resists corrosion.



Montedison Sets Deadline For Fermenta Agreement

Montedison SpA, the Italian chemical giant, said last week it would pursue an "alternative" acquisition if an agreement is not struck by November 30 assuring the company eventual control of Fermenta, the Swedish chemicals and pharmaceutical concern.

At a shareholder meeting in Milan last week, Mario Schimberni, chairman of Montedison, said the company had an "equivalent" acquisition on standby.

Montedison has said it would pay \$340 million for the controlling interest in Fermenta held by Refaat El-Sayed, Fermenta's chief executive officer. Mr. El-Sayed holds 6 million Fermenta A shares and 11.35 million B shares, giving him a 78.5 percent voting control of the company.

According to the concerns of Fermenta's labor unions, Montedison agreed in concept to a plan, under which it would initially acquire only part of Mr. El-Sayed's holding. After a transition period, during which Mr. El-Sayed would remain chief executive of Fermenta, his remaining shares would be sold to Montedison.

Last week, it was reported that Mr. El-Sayed had reached agreements to sell a total of 3 million A shares of Fermenta to three separate Swedish investment institutions, with two of the agreements including buy-back options.

According to published reports, Mr. El-Sayed provided misleading information

about the financial details of the agreements to the Swedish stock exchange, raising the possibility that the company could be expelled from the exchange.

Montedison, meanwhile, said it would not negotiate with the institutions on the acquisition of Fermenta shares. "We are negotiating only and purely with Mr. El-Sayed," a Montedison spokesman in Milan said last week.

The Montedison spokesman said the company's objective was to acquire Mr. El-Sayed's entire holding. He did not rule out the possibility that Montedison would agree to acquire a lesser controlling stake, but he also stressed that the company's \$340 million offer would also be reduced accordingly.

While Montedison has accepted the notion of a gradual attainment of control over Fermenta, the company insists that the transition period must be "very, very rapid," according to its spokesman, who added that the Italian firm would not accept "any limitation of our entrepreneurial control" over Fermenta.

Mr. Schimberni said last week that he was setting the November 30 deadline to avoid a sustained period of uncertainty regarding Fermenta.

He also said an agreement was needed by then in order to allow time for Montedison to prepare plans to integrate Fermenta's agribusiness and pharmaceutical operations with those of Montedison. Montedison stressed that it did not have any rationalization plans in store for Fermenta.

Despite declining demand in certain segments of the polystyrene market, sources report that growth in extrusion and molding segments has exceeded producers' hopes, outstripping even the most optimistic predictions for the market.

Prices for EBP (expandable bead polystyrene) grades and flame-resistant grades will not be affected, they say, nor will list prices for the grades involved.

The price hike should move selling prices

for general purpose crystal into the 35 to 40 cents per pound range and those for high impact grades to a range of 87 to 92 cents per pound, sources report.

Earlier attempts to raise polystyrene

VOLUME 230
Number 10

Chemical Marketing Reporter

SEPTEMBER 8, 1986

Polystyrene Demand Exceeds Expectation

Despite declining demand in certain segments of the polystyrene market, sources report that growth in extrusion and molding segments has exceeded producers' hopes, outstripping even the most optimistic predictions for the market.

Prices for EBP (expandable bead polystyrene) grades and flame-resistant grades will not be affected, they say, nor will list prices for the grades involved.

The price hike should move selling prices for general purpose crystal into the 35 to 40 cents per pound range and those for high impact grades to a range of 87 to 92 cents per pound, sources report.

Earlier attempts to raise polystyrene

Continued on Page 33

Cyanamid Isocyanates Based On a Non-Phosgene Route

American Cyanamid Company says it has begun building a \$20 million aliphatic isocyanate production facility in Willow Island, W. Va. The plant, which is due on stream in mid-1987, will produce tetramethyl xylene di-isocyanate (TMXDI) and isopropenyl dimethyl isocyanate (TDI) without using phosgene as a raw material.

A company spokesman says Cyanamid's isocyanate process is derived from "cracking a urethane material." All other US isocyanate producers use phosgene as a precursor.

Cyanamid's products will compete against Mobay Chemical Corporation's aliphatic isocyanate, hexamethylene di-isocyanate (HDI), which was developed by Mobay's parent company, Bayer, AG, and Nudex's isophorone di-isocyanate (IDDI), produced by its German parent, Hüels AG. A Mobay official says the current market for aliphatic isocyanates stands at 30 million pounds per year.

The major use for aliphatic isocyanates and polyisocyanates are as light stabilizing agents in protective coatings for building exterior insulation, vapor retardant equipment and other areas where insulation is required.

isocyanate resistance is required.

Steve Crum, general manager of Cyanamid's urethane chemicals and elastomer department, says the non-phosgene production route chosen by Cyanamid may use lower cost raw materials than conventional processes, and avoids the "environmental concerns" associated with phosgene.

The company declines to say exactly how large the facility will be, referring to it only as a multi-million pound source of material.

The plant marks Cyanamid's first venture into isocyanate production, but the company is well-positioned in a number of related fields. The company produces and markets polyurethane elastomers derived from isocyanates, and is also well established in the coating market through the production of melamine cross-linking resins.

In addition to selling its aliphatic isocyanates to the protective coatings market, Cyanamid plans to sell TMXDI and TDI to the elastomer market and is already interested in the reaction injection molding market. Mr. Crum says Cyanamid has formed a joint venture with the Belgian firm Recetech to market light stable MDI products. Recetech's market leaders have expressed interest in the joint venture. Cyanamid has also expressed interest in the joint venture.

Dow Chemical Company led the move to increase resin prices, announcing the change publicly two weeks ago. Mobil and American Petrofina followed, informing customers in

DOW POLYSTYRENE: Dow recently led an attempt to improve profitability in the polystyrene business by raising its prices. A number of other producers have followed suit.



Continued on Page 26

Job Hazard Warning Urged For Workers by Dr. Selikoff

As early warning system for workers whose health has been put at risk by on-the-job exposure to hazardous substances can save lives and should be created, an occupational disease expert has told Congress. Dr. Irving Selikoff urged House members in a letter to approve the High Risk Occupational Disease Notification and Prevention Act, a bill that would establish a Federal program to identify specific worker populations at high risk of disability and death from diseases caused by exposure to toxic substances in the workplace.

The House is expected to vote on the measure this month. A similar bill is pending in the Senate Labor and Human Resources Committee.

The legislation, which is backed by labor unions but opposed by the chemical industry, would also make medical testing and counseling available to workers in the high risk category.

Chemical Manufacturers Association and National Association of Manufacturers have testified against the proposals, arguing they would duplicate efforts of other governmental agencies while imposing new, costly burdens on industry.

Dr. Selikoff told the lawmakers there is a growing identification of cancers with occupation.

He cited studies that linked liver cancer to exposure to vinyl chloride, bladder cancer to benzidine used in dye plants, mesothelioma from exposure to asbestos and several other job-associated cancers.

Dr. Selikoff noted that since most cancer is environmental in origin, the ideal solution would be prevention. But he emphasized that early awareness of the risk can help many exposed workers minimize the risk of contracting cancer.

Continuing medical surveillance of high-risk groups, another feature of the legislation, can assure early detection and treatment, Dr. Selikoff said.

Carbide Signs Letter On Acetic Plant Sale

Union Carbide Corporation has signed a letter of intent for the sale of the assets of its Brownsville, Tex., chemical manufacturing facility to R.I.O. Systems, Inc., an industrial development corporation based in Brownsville.

The agreement is expected to become final by the end of this year. Proceeds of the sale will be used to reduce corporate debt.

Under terms of the sale, Union Carbide will have an option to restart an acetic acid production unit on the site.

Union Carbide operated at the Brownsville site from 1958 to 1983.

Fluorocarbons Output Rising

The 1985 production of chlorofluorocarbons 11 and 12 increased from 1,631 million pounds (894,000 thousand metric tons) in 1984 to 1,550 million pounds (703,200 thousand metric tons) in 1985, according to a recent report prepared by Grant Thornton & Company.

The production figures are reported to Grant Thornton by 21 companies in North America, South America, Western Europe, Japan, Australia, Africa, and India. Nineteen of these reporting companies fund the Fluorocarbon Program Panel (FPP) of the Chemical Manufacturers Association, which supports an international program of research on the potential atmospheric effects of CFCs and also sponsors this annual report. Grant Thornton & Company, an independent accounting firm, compiles the figures from confidential reports submitted by the reporting companies.

In addition to the model rule, EPA is also proposing information requirements for 48 chemicals.

Interleukin-2 Patent

Interleukin-2 Inc. says the European Patent Office has approved its patent covering a proprietary process for the manufacture of Interleukin-2. According to the company, the European patent covers Interleukin-2's technology in the US, France, West Germany, Switzerland, Austria, Italy, Sweden, Holland and Liechtenstein.

September 8, 1986

Chemical Marketing Reporter



J. Murfrees Butler, who has been appointed group operations officer of W.R. Grace & Co.'s industrial chemicals group, with responsibility for the newly-formed Interamerican Division. This division is the result of a combination of the formerly separate Pacific and Latin American specialty chemical operations.

Grace Reorganizes In Pacific, S. America

W.R. Grace & Co. has reorganized its Pacific and Latin American specialty chemical operations into two divisions — the Pacific Division and the Interamerican Division. Previously, these businesses had operated as the Pacific-Interamerican Division.

J. Murfrees Butler, a senior vice-president of Grace, has been appointed a group operations officer of the company's Industrial chemicals group, with responsibility for the Pacific and Interamerican divisions. Lawrence R. Vator, Jr. will serve as president of the Pacific Division and Antonio R. Ferreira becomes president of the Interamerican Division.

In commenting on the reorganization, Robert W. Samuels, a Grace executive vice-president and head of the company's specialty chemical operations, said, "This decision recognizes the vast geographical responsibility of the Pacific and Latin American regions. Our aim is to better concentrate resources in the two different areas."

Recent technological advances in the asbestos industry have resulted in significantly improved products and processes, creating unique opportunities for producers with plants that capitalize on the latest and most efficient technologies," according to Ellis Fleming, director of manufacturing for Newport.

Industrial Gas Plant Supplied to Japan

Air Products & Chemicals, Inc., has signed a contract with Nippon Steel Corporation for the supply of cryogenic technology and process equipment, technical assistance and start-up services for a new air separation unit at Nippon Steel's Yawata Works in Tobata, Japan.

Nippon Steel's plant and machinery division (PMMD) will work with Air Products on the project, supplying additional equipment and construction services.

The facility, scheduled for start-up in the second half of 1987, will produce 25,000 normal cubic meters per hour (950 tons per day) of high-purity oxygen, nitrogen, and argon.

The oxygen, nitrogen and argon will be used for steel production at the Yawata works. Part of the argon product will also be used in a Nippon Steel subsidiary company for electronics manufacturing. The contract marks the first time a US industrial gas company has supplied cryogenic air separation equipment to a major third-party user of industrial gases in Japan.

In addition to the model rule, EPA is also proposing information requirements for 48 chemicals.

However, the agency says since it expects to add other chemicals to the rule in the future, any chemical manufacturer, importer or processor is potentially subject to the proposal.

EPA also says it is offering the use of CAIR to other Federal agencies for their information-gathering needs.

Chemical Marketing Reporter

Volume 62 No. 36

Founded October 1, 1917, by William D. Allen
Directed 1900-1942 by Harry J. Schnell
Schnell Publishing Company, Inc.
100 Church Street, New York, N.Y. 10007-2904
(212) 732-8820. Telex Number: 226113 CMR DR.
Copyright 1986 by Schnell Publishing Company, Inc.

ABP ABC PT NEWSWIRE

EDITOR-IN-CHIEF

Harry Van

MANAGING EDITOR

Currie A. Devry

ASSISTANT MANAGING EDITOR

William Goodwin

NEWS EDITOR

Owen Keay

WASHINGTON EDITOR

Glen H. Hess, 1057C National Press Building,
Washington, D.C. 20045

MARKET RESEARCH EDITOR

Vincent O'Sullivan

SENIOR EDITOR

James V. Gutierrez

STAFF EDITORS

Ronald Bagley, Nicholas Boyle, Stephen

Kearney, Philip Mann, Michael McCoy, Agnes

Shanley

CONTRIBUTING EDITOR

Sean Milmo

BUSINESS STAFF

VICE-PRESIDENT OF MARKETING - John A. Mc

Hannan

DIRECTOR OF ADVERTISING SALES - J. Ronald

Ooran

ASSISTANT PUBLISHER - Don L. Richard

NEW YORK (212) 732-8820 - Amanda H. Boettcher,

Mark C. Carroll, Robert W. Weiske, and

Wilson S. Winney

CHICAGO (312) 732-8820 - Charles H. Ostrem,

James E. O'Donnell, Arlington Publishers Rep-

resentative, Inc., P.O. Box 1555, Arlington

Heights, Ill. 60008

HOUSTON (212) 732-8820 - Wilson S. Winney

Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

LOD ANOELIEB (213) 450-8001 - Richard W.

Walker, R.W. Walker Company, 2178 Ocean

Front Street, Redondo, Suite 1010, Santa Monica,

Calif. 90204

BAN FRANCISCO (415) 783-8888 - Richard W.

Walker, R.W. Walker Company, 2178 Ocean

Boulevard, Suite 1010, Santa Monica,

Calif. 90204

EUROPE (312) 480-8898 - Robert Broekman

American Publishers Representative, Inc., No.

47, rue Robert de Flers, 75015 Paris, France

JAPAN (03) 583-1151 - Hiroshi Saito, I.M.H. Inc., 4-1

Chome, Higashiazabu, Minato-ku, Tokyo, Japan

CHINA (Tele: 5-232181, Telex: 75355 AURIC

HK) - Alison Lutz, China Consultants Interna-

tional (HK), Ltd., Suite 805, Guardian House

32, Qian Wang Road, Happy Valley, Hong Kong

CNA AD PRODUCTION - Hsi-Yen Shieh, Taipei, Taiwan

OPO CHEMICAL BUYERS DIRECTORY - Gaston

Cardeco, Veronica Gilotti

PUBLISHER

Arthur F. Kavaler

CHEMICAL MARKETING REPORTER

ISSN 0009-0997 Vol.

No. 16, September 8, 1986

Published weekly on Monday

by Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

Subscription price \$1,140 per year, postage

paid at New York, N.Y. and at other post offices.

Copy price \$1.50. Subscriptions outside

U.S.A. \$1.50. Single copy \$1.50. Second class

postage paid at New York, N.Y. and at other post

offices. Copyright 1986 by Schnell Publishing Company, Inc., 100 Church Street, New York, N.Y. 10007-2894

Second class postage paid at New York, N.Y.

and at other post offices.

Postmaster:

Send address changes to

Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

Telephone: (212) 732-8820

Telex: 226113 CMR DR

Copyright 1986 by Schnell Publishing Company, Inc.

100 Church Street, New York, N.Y. 10007-2894

Second class postage paid at New York, N.Y.

and at other post offices.

Postmaster:

Send address changes to

Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

Telephone: (212) 732-8820

Telex: 226113 CMR DR

Copyright 1986 by Schnell Publishing Company, Inc.

100 Church Street, New York, N.Y. 10007-2894

Second class postage paid at New York, N.Y.

and at other post offices.

Postmaster:

Send address changes to

Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

Telephone: (212) 732-8820

Telex: 226113 CMR DR

Copyright 1986 by Schnell Publishing Company, Inc.

100 Church Street, New York, N.Y. 10007-2894

Second class postage paid at New York, N.Y.

and at other post offices.

Postmaster:

Send address changes to

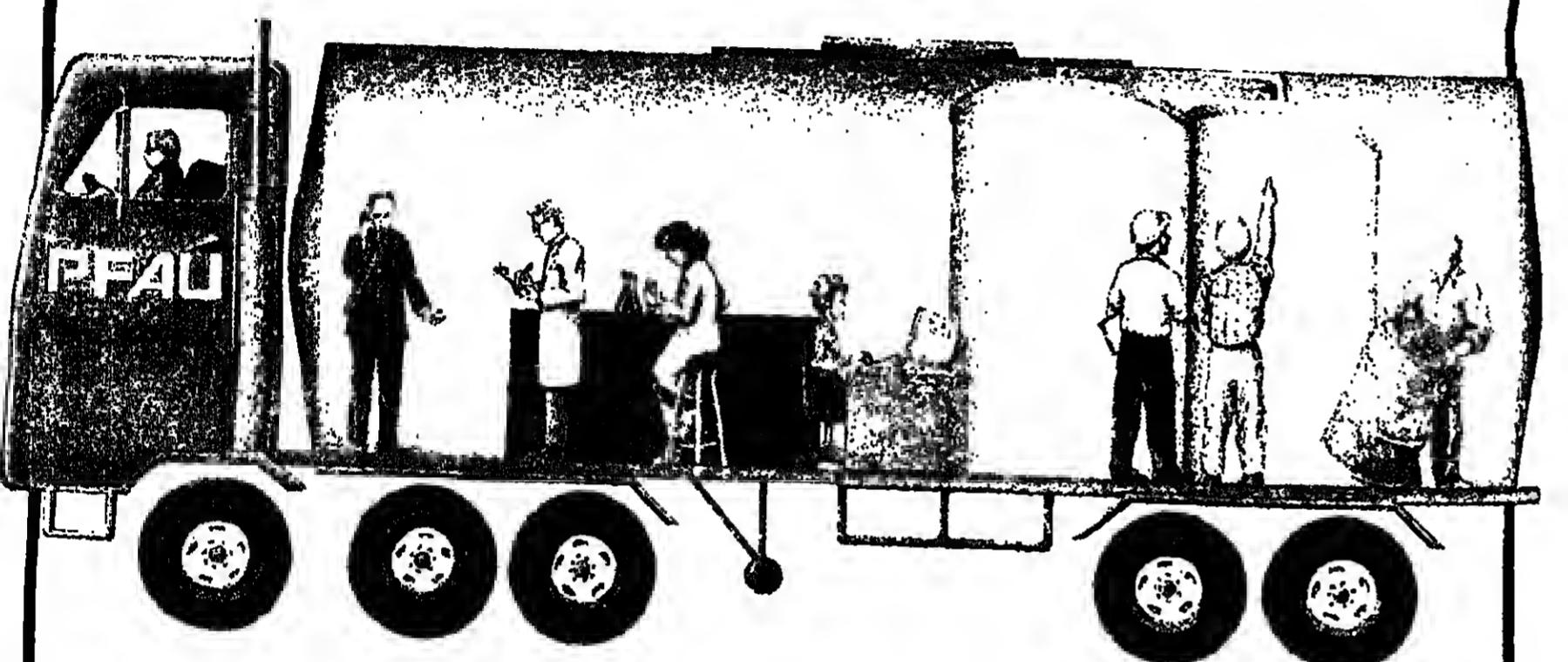
Schnell Publishing Company, Inc., 100 Church

Street, New York, N.Y. 10007-2894

Telephone: (212) 732-8820

Pfau Teamwork

- Bringing you complete service and a complete product line
- Quality products
- Quick, dependable delivery
- Technical support
- Problem solving and specialization



Manufacturing Since 1869
Lard Oils
Tallow Oils
Fatty Acids
Blown Oils
Neatsfoot Oils
Tallows
Stearines
Technical Oleo Stearine



PFAU

PEACOCK™ INDUSTRIAL OILS
Geo. Pfau's Sons Company, Inc.
P.O. Box 7
Jeffersonville, Indiana 47131
1-800-PFAU-OIL
In Indiana call 812-283-6697
Telex 20-4135

Fertilizer and Art

Armand Hammer, chairman of Occidental Petroleum Corporation, used the opening of an art exhibition in the USSR last week as an occasion to plug his fertilizer dealings with the Soviets.

Explaining why he chose Odessa as the latest site for his traveling exhibition, "The Armand Hammer Collection: Five Centuries of Masterpieces," the Oxy chairman noted that his father had been born nearby more than 100 years ago and that Odessa is also the center of Occidental's fertilizer business with the Soviet Union.

Under a 20-year arrangement, Oxy supplies the Soviets with superphosphoric acid in return for ammonia, urea and potash. The relationship is now in its eighth year.

"It has stood the test of time," Dr. Hammer told last week at the opening of the exhibition, referring to his fertilizer deal with the Soviet Union, not the art. "The

project continues to run smoothly, to the mutual satisfaction of both sides."

It hasn't always been so. The Carter Administration banned the sale of US superphosphoric acid to the Soviet Union in early 1980, following the Russian invasion of Afghanistan. The ban was lifted shortly after the Reagan Administration took office.

The Odessa art exhibition, meanwhile, is the fourth such exhibit Dr. Hammer has opened in the Soviet Union since the signing of a US-Soviet art exchange last December.

The Hammer collection was last shown in Odessa 13 years ago. The collection currently includes 127 works, including 28 works not previously shown in Odessa. One of the more recent additions to the collection is Rembrandt's "Juno."

The collection was shown earlier this year in Moscow, Leningrad and Novosibirsk. It travels next to Kiev.

Phosphate to Recover Slowly Over 5 Years

While phosphate fertilizer producers are enduring lackluster demand and less than break-even prices, analysts in the industry are predicting a slow recovery over the next five years.

Continued on Page 31



PHOSPHATE TERMINAL: Product waiting for shipment at Fausina warehouses, owned by Agrico Chemical. Inventories are said to be quite low now.

Membrane Gas Separators Introduced by Monsanto Unit

Advanced-generation membrane gas separators that are 200 percent to 400 percent more efficient than current separators have been developed by Permea Inc., the company said last week. This development was based on the invention by Permea scientists of a method to alter the structure of a broad range of membranes.

"For the first time, gas separating membranes can be tailor-made to give the permeabilities needed to separate any given gas from others," says Raghu Narayan, Permea's director of technology. "No longer do the inherent characteristics of the polymer dominate in the determination of a membrane's permeation rate and selectivity."

"With this new capability, we have used commercially available polymers to make second-generation membranes that are two to four times more efficient than any separating membrane now available," he said.

Dr. Narayan said that the technological breakthrough resulted from "a ninety-degree departure" from the industry's usual approach to membrane research and development.

Membrane research has tended to focus on the molecular structures of specific polymers as the way to improve efficiencies and

separation qualities. "According to this approach, whoever found the best polymer had the best membrane," he said. "We at Permea followed that course in the past, especially with brominated polypropylene oxide, which we found promising."

At the beginning of this year, Permea researchers changed course. "Instead of continuing to pursue specific polymers, our researchers looked for and discovered a means of altering the structure and chemical characteristics of asymmetric membranes generally," Dr. Narayan said.

"You start with polymers with demonstrated utility for separations," he said, "but the revolution is in influencing the morphology of the membrane by altering the formulation from which it is made."

According to Dr. Narayan, this discovery by Permea's scientists means that the inherent properties of a specific polymer, while important, count for less than the way the membrane is formed. "We can now make vastly improved membranes using well-known polymers. We don't have to resort to the more exotic ones."

As a result of this development, a single polymer can be made into different membranes with major variations in performance. "It's like graphite and diamonds. Both

Continued on Page 18

Combustion Engineering Sets Environmental Service Division

Combustion Engineering, Inc., the large Stamford, Conn.-based construction engineering and consulting firm, says it is branching into the potentially lucrative environmental services business. C-E says it has formed a new operation, called Environmental Systems and Services, to provide environmental consulting services, hazardous site cleanup, and systems necessary to address hazardous waste issues in public and private sectors.

"Concern for the environment is clearly a national imperative. In light of emerging legislation and public awareness, we anticipate a substantial growth business in providing solutions to country's environmental problems," says Dudley C. Mecum, president of C-E's Urban Systems and Services Group. The company estimates that environmental services spending will grow from \$4 billion per year to \$7 billion annually by 1990.

C-E says it will apply its knowledge of process engineering, construction, waste management and project management services unit also operated within the Urban Systems and Services Group.

Resource Recovery Systems, another unit

first project is the design and construction of a 26,000-ton-per-year offsite commercial hazardous waste incineration facility in Southern California. C-E says the plant will be able to handle about 33 percent of the burnable hazardous waste generated in Los Angeles County. The company says it may acquire other businesses as a way of expanding its environmental services business.

The Environmental Systems and Services group will be run by R. Neil Evans, who previously was vice president of corporate marketing at Combustion Engineering. The new business unit will operate within C-E's Urban Systems and Services Group. In August, Combustion Engineering set up the Operations and Maintenance Service Group, another unit of Urban Systems and Services.

This unit will serve the worldwide market for the operation and maintenance of government and industrial facilities.

Resource Recovery Systems, another unit in the group, was recently awarded over \$600 million in contracts to provide waste-to-energy plants. Lummus Crest, C-E's engineering and project management services unit also operated within the Urban Systems and Services Group.

Resource Recovery Systems, another unit

damages and injuries suffered by the people has not yet been determined.

India rejected Union Carbide's offer of a \$350 million out-of-court settlement as totally inadequate.

Union Carbide has alleged sabotage by disgruntled workers and said water deliberately was introduced in the gas tank, setting off a reaction and causing the explosion and leak.

The Indian government and plant workers have denied the allegations.

The government filed its suit after US District Court Judge John Keenan ruled in New York on May 12 that the case must be tried in India. India wanted to try the case in the US, which generally grants much higher compensation than India.

The suit contends the Union Carbide plant lacked adequate safety measures, had inherent design flaws and was improperly maintained.

Radioactive Chemicals Slated for US Review

Environmental Protection Agency says it plans to expand its regulations to control radioactive chemicals and decay products, such as radionuclides, in public water supplies.

The announcement, contained in an Advance Notice of Proposed Rulemaking, requests public comment on regulations being considered under the Safe Drinking Water Act for radium-226, radium-228, natural uranium, radon, and gross alpha, gross beta and photon emitters. All are known or probable human carcinogens. In addition, uranium is chemically toxic to the kidneys.

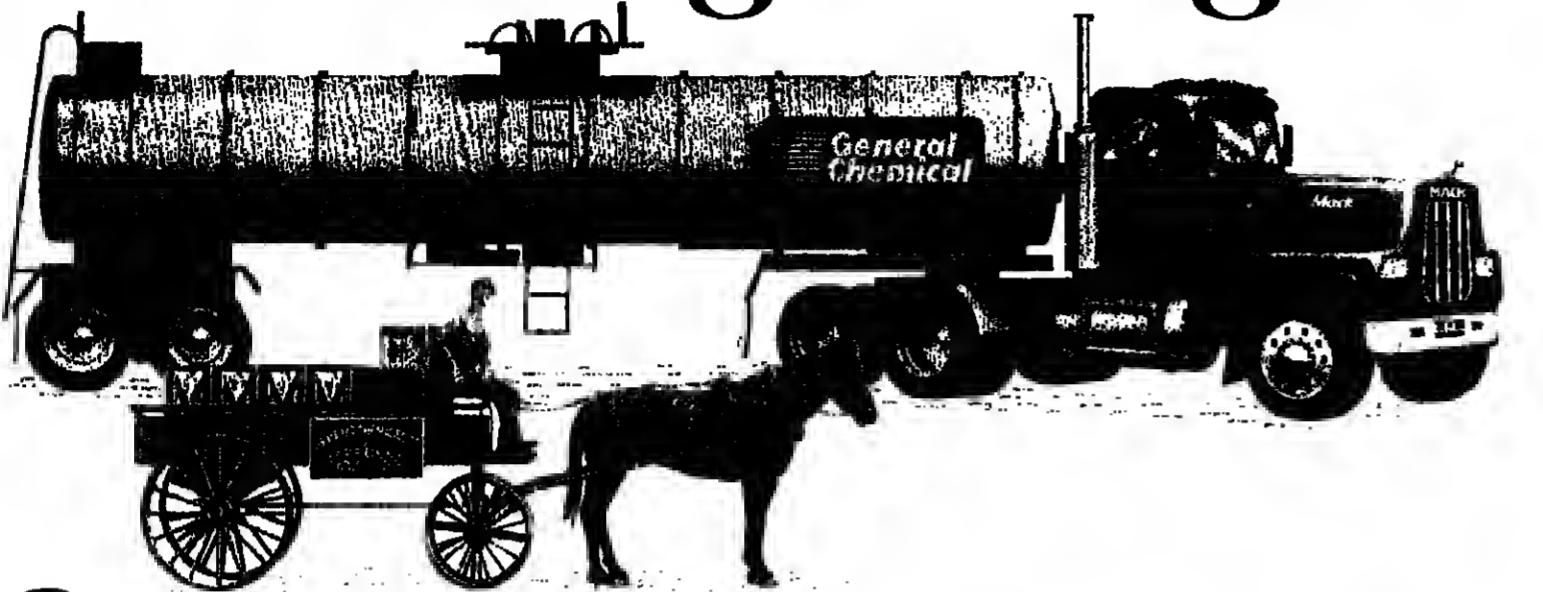
"We intend to propose new regulations on these radioactive chemicals and decay products as soon as next summer," said Lawrence J. Jensen, EPA Assistant Administrator for Water.

"Radium appears to be one of the largest health threats in water supplies," Jensen said, "and treatment methods to lower concentrations will be below any anticipated regulatory limit are readily available."

Radionuclides are radioactive decay products which can be naturally occurring, man-

Continued on Page 25

A new beginning...



from an old friend

In 1899 twelve small chemical companies formed General Chemical Company, establishing a tradition of supplying quality chemical products, backed by responsive customer service. Later, General Chemical became part of Allied Chemical Corporation where we remained a driving force for assuring a high level of attention to customer needs.

Today, there's a new General Chemical, a corporation formed from those earlier businesses in the spirit of the original company. For specialty fine and photo chemicals, electronic chemicals and sodium nitrite as well as a range of process chemicals such as sulfuric acid, soda ash, calcium chloride and aluminum sulfate, think first of General Chemical.

We're dedicated to high quality... a

quality you'll see in our products' performance. Plus we've forged a strong management team of industry specialists who know and understand your problems. They head an organization fine-tuned for knowing your needs and meeting them promptly and courteously.

Our customer philosophy reflects a time-honored tradition—the customer is king. If you're an old friend, we look forward to welcoming you back as a satisfied customer. If you're a friend we haven't met yet, we look forward to demonstrating that our commitment to you is a commitment you can depend on.

For more information call or write: General Chemical Corporation, CN 1828, Columbia Rd. at Park Ave., Morristown, NJ 07960 800-631-8050

General Chemical

Where the customer is king

Formerly part of Allied Chemical Corporation

News Capsule

PPG, GE Complete Deal

PPG Industries and General Electric Company have completed the formation of their previously-announced joint venture, Axial Inc., which manufactures and markets reinforced thermoplastic composite sheet. The new company is based in Shelby, NC. Agreement to form the venture was announced in July.

Strong Point Buys

Strong Point Inc., Irvine, Calif., has acquired Tri Coast Engineering, Corona, Calif., marking Strong Point's entrance into the hazardous waste cleanup business. Strong Point previously announced the formation of Lumbyard Development Company and a \$3.5 million acquisition of the Lumbyard Village Shopping Center.

Nitric Acid Tanks

Sea Containers Ltd., Bermuda, has delivered the first seven of 18 nitric acid tank containers to Bougainville Copper Ltd., Sydney, Australia. The IMO type tanks have been designed by Sea Containers for high strength nitric acid. Bougainville Copper operates one of the world's largest copper, gold and silver mines in Papua New Guinea.

ICI Buys Operation

ICI Australia has acquired a US zirconia operation in a move designed to further develop world markets for its range of advanced ceramic powders and chemicals. ICI has purchased the zirconia operation of Ferral Corporation, based in Bow, N.H. The US zirconia business will operate as a wholly-owned subsidiary of ICI Australia under the name, Z-Tech Corporation.

Matlack Opens Terminal
Matlack Inc., the bulk trucking company, has opened a new full-service terminal in Sulphur, La., to serve chemical and petrochemical producers in and around the Lake Charles area. The terminal will account for about \$5 million in annual revenues. It includes three full-service cleaning bays with modern cleaning and waste treatment equipment, as well as two full maintenance bays.

Plant Strain Cleared

A new insect-resistant, genetically engineered tobacco plant developed jointly by Rohm and Haas Company and Plant Genetic Systems of Belgium has been found not to be a plant pest, according to US Department of Agriculture. USDA is required to prevent the introduction and dissemination of plant pests in the US.

Apache Changes Name

Apache Chemicals Inc., a manufacturer of liquid diffusion systems, will operate under the name Olin Hunt Specialty Products Inc. The company was acquired by Olin Corporation two years ago and has operated since then as a division of Olin Hunt Specialty Products. The company's product line will be marketed through the Olin Hunt Microelectronics Business Group.



HIMONT FACILITY: This joint venture of Montedison and Hercules has been performing well, according to the Italian company, making a significant contribution to current earnings.

Shamrock Agrees to Buy Retail Fuel Firm

Diamond Shamrock Refining & Marketing Company, subsidiary of Diamond Shamrock Corporation, has agreed to acquire Royal Petroleum Inc., a privately-owned, Denver-based retail motor fuel marketer. Terms have not been disclosed.

Royal Petroleum owns and operates 42 retail motor fuel outlets in Northern Colorado, including 25 outlets in the Denver metropolitan area.

Diamond Shamrock says the acquisition is part of its plan to double direct retail motor fuel sales volume during the next five years. The company currently owns and operates roughly 500 retail gasoline/convenience store outlets, including 440 branded outlets in Texas.

The company also markets Diamond Shamrock-branded motor fuels through 1,500 independently owned jumbo outlets in 17 Southwestern and Rocky Mountain states.

Acquisition of Royal Petroleum is expected to be completed this month.

PPG Industries Sees Big Growth In Biochemicals

PPG Industries is preparing for significant growth in biochemicals by doubling the manpower of its reorganized sales team and adding a new marketing manager.

"We'll add 16 sales representatives this year; seven already are on board and the rest will join us before year's end," says Thomas M. Von Lehman, biochemicals general manager.

"These key people are being strategically positioned to increase our service capabilities in major corn and soybean growing areas east of the Rockies."

"Four sales districts—West, Midwest, Mid-Atlantic and Atlantic—have been created in place of the previous two regions. In line with the sales team expansion, this reorganization provides a clearer focus on key markets for 'Genate' and 'Genep' herbicides, and prepares us for the planned 1987 growing season launch of new 'Cobra' soybean-field herbicide," Mr. Von Lehman said.

Pittsburgh-based PPG's current line of crop-protection chemicals includes "Genate" herbicide for cornfield weed control, "Genep" herbicide for weed control in fruits, "Genep" herbicide for weed control in lawns.

Continued on Page 16

Montedison Earnings At \$162 MM in Half

Montedison Group, the diversified Italian company, raised its first-half consolidated income before minority interests to \$162 million from only \$11.4 million in the same period a year ago. The Himont joint propylene venture with Hercules Incorporated and petrochemicals and plastics were among the star performers.

Montedison's results are now solidly in the black after years of losses and a token profit in the 1985 calendar year. Montedison SpA, the parent company based in Milan, Italy, had earnings of \$60 million, as compared with \$2 million a year ago. (Results in lire for both years have been converted at the current exchange rate).

In health care, sales volume increased with the introduction of new products, but gross operating income decreased because export revenues were adversely affected by the declining value of the dollar, which reduced income in lire. Erbamont NV, the big pharmaceutical subsidiary, raised its quarterly dividend to 10 cents per share from 7½ cents.

The strong showing was due mainly to better operating performance in most of Montedison's activities, but greater efficiency and lower financing costs also contributed to the final result.

The company's total revenues declined to 8,459 billion lire, down 9.5 percent from a year ago, reflecting the decline in prices for crude oil and prices of the petrochemicals closest to the barrel of oil.

In petrochemicals and plastics, gross income increased markedly, despite decreased revenues, and results in the Himont joint ven-

ture also improved considerably. Montedison stated. Specialty and high-performance materials continued to experience a favorable trend in both earnings and revenues, particularly in fluoropolymers, Montedison noted. Earnings were also strong in fibra, Compo, a jointly owned American subsidiary, is in the process of rationalizing its production and diversifying its activities, Montedison dis-

closed.

In health care, sales volume increased with the introduction of new products, but gross operating income decreased because export revenues were adversely affected by the declining value of the dollar, which reduced income in lire. Erbamont NV, the big pharmaceutical subsidiary, raised its quarterly dividend to 10 cents per share from 7½ cents.

The strong showing was due mainly to better operating performance in most of Montedison's activities, but greater efficiency and lower financing costs also contributed to the final result.

The company's total revenues declined to 8,459 billion lire, down 9.5 percent from a year ago, reflecting the decline in prices for crude oil and prices of the petrochemicals closest to the barrel of oil.

In petrochemicals and plastics, gross income increased markedly, despite decreased revenues, and results in the Himont joint ven-

Chemical to Detect Arson

A technique developed at the Commerce Department's National Bureau of Standards (NBS) shows promise in detecting arson by chemically analyzing soot samples for by-products of the materials used to start the fires.

In experiments conducted at the bureau's Gaithersburg, Md., facility, NBS researchers have found that the accelerants used by many arsonists to start fires—hydrocarbon-based liquids such as gasoline, kerosene, and paint thinner—produce specific combustion "daughter products" that become part of the soot.

Known as polycyclic aromatic hydrocarbons (PAHs), these products can be removed by solvent extraction from sooty deposits sampled at the scene of a fire. NBS scientists use gas chromatography

(GC) to detect the presence of PAHs. The analytical test is "a very simple one that could be easily used as a forensic device," says Stephen N. Chesler, an NBS chemist and chief scientist for the project. He adds, however, that the method is experimental at this point and needs further investigation.

Mr. Chesler's research began several years ago at the urging of the Law Enforcement Standards Laboratory, a branch of NBS. The initial goal was simply to analyze soot for the presence of gasoline and other accelerants. Early tests using the GC technique were unsuccessful.

The next step was to use the same accelerants to burn household materials such as

Continued on Page 23

Baxter Travenol Completes The Sale of Its Flint Division

Baxter Travenol Laboratories Inc. last week completed the sale of its Flint prescription drug business to Boots America Inc., a subsidiary of Boots Company of the UK, for \$555 million. A purchase agreement was announced last month (C&R 6/11/86, pg. 5).

Under the terms of the agreement, Baxter Travenol could receive additional payments of up to \$45 million, depending on the future sales performance of Flint's chymopapain products, "Disease" and "Chymodilatin." According to Boots, neither product is doing very well at the moment.

After-tax proceeds of approximately \$400 million will be used by Baxter Travenol to reduce the debt incurred in its \$3.7 billion acquisition last year of American Hospital Supply Corporation.

Proceeds from the Flint sale will eliminate Baxter Travenol's need to continue refinancing floating-rate debt into fixed-rate debt, as originally planned, the company says. As a result, accumulated deferred interest-rate hedging costs of approximately \$86 million will be reflected as an extraordinary expense in the company's third quarter financial results. The company says it will report approximately \$225 million of non-recurring net income in its third quarter results.

Baxter's major product is "Synthroid," a drug used to treat thyroid deficiencies. It accounts for about 80 percent of Flint's total sales.

Boots is best known for its "Motrin" drug for the treatment of rheumatism. The company has a heart drug under development in the US and Europe, which it hopes to market here by 1990.

Baxter Travenol will now focus on medical and surgical manufacturing and distribution, information systems and home care clinics and labs.



When it comes to a helping hand, some vitamin suppliers offer more than others.

There's a lot more to Takeda vitamins than vitamins. We give you people. People you can talk to, ask questions of, get answers from. All over the country, 24 hours a day.

Takeda has been growing for the past 200 years on the basis of personal, direct, reliable, responsible service to make technical innovation and product superiority helpful and profitable for customers.

We're old hands at the team approach to service. Technical service for product development or reformulation. Unremitting quality control. Personal attention to orders (and follow-through). On-time delivery. People you talk to regularly, who listen and care.

Call us today. We've got lots of hands ready to help with your vitamin needs.



TAKEDA-FALLEK SALES

A Division of Takeda U.S.A., Inc.

400 Park Avenue, New York, N.Y. 10022 / 800-847-4220; In N.Y. State 212-421-6950 Telefax 212-355-5243; Telex USA 421149

OILS, FATS & WAXES

Bean Oil Market Tightens Up As Crush Falls, Exports Rise

The soybean oil market is finding some relief at present from the oversupply situation that has been troubling it for most of the year. Most of the reduction in supplies is due to a combination of reduced crushing rates and an increase in export movement.

The US government has been buying large amounts of soybean oil in recent days to fuel active world trading. Last Wednesday the government purchased 18,000 metric tons of soy oil for donation to Pakistan. The donation comes under a Title II initiative of PL 480. The material involved, crude de-gummed soy oil in bulk, is due designated for September shipment.

Just days before this purchase, Bangladesh bought 13,000 metric tons of crude, de-gummed bulk soy oil. The authorization, under Title II of PL 480, was issued on August 29.

Also issued a purchase authorization under Title II was the Dominican Republic. They are designated to buy 30,000 tons of oil in the next few months.

All of this comes amid reports from traders that soybean oil production is down for August, and will also be down in September. Production of the oil in July was 899 million pounds; in June it was 882 million pounds.

These figures are down from monthly production levels earlier in the year that were over 900 million pounds, in the case of March and January, over one thousand million pounds, according to Department of Agriculture figures.

An estimate based on preliminary figures from the Agriculture Department shows August production level to be 20 to 30 million pounds less than July's level. This bears out the belief by soy oil traders that this month and last month will show reductions in crush rates when final figures become available.

The market cannot be expected to maintain its current relative tightness, however. A rise in European demand for soybean meal has been helping to support the rate of crush. Following a seasonal cycle, the Europeans' demand for the meal can be expected to continue to climb throughout the Fall months, a source says.

Also, the US government is holding a large amount of soybeans under Commodity Credit Corporation ownership. These beans can be expected to be released sometime after the last harvest is fixed. The deadline for fixing the rate, currently set at \$4.77 per bushel of soybeans, is October 1.

After that date, the government may release the beans, stimulating the crush rate. Increasing this likelihood is the fact that

FRIDAY SPOT PRICES

MARKET CLOSE SEPT. 5, 1986

CRUDE VEGETABLE OILS

Cotton oil, NY	lb. 12½
Cotton oil, Pacific	lb. 12½
Corn oil, Midwest	lb. 15½
Cottonseed oil, Valley	lb. 15½
Linseed oil, Minneapolis	lb. 28
Palm oil, NY	lb. 1100
Peanut oil, Southeast (refined)	lb. 26½
Soybean oil, Decatur	lb. 13½

REFINED VEGETABLE OILS

Cotton oil, l.w., NY	lb. 17½
Corn, jumbo tanks	lb. 23
Cottonseed oil, jumbo tanks, NY	lb. 23
Soybean oil, jumbo tanks, NY	lb. 37½
Soybean salad oil, NY	lb. 17½

ORMEALS

Cottonseed, 14% bulk, Memphis	ton 9120
Linseed, extracted, 24% bulk, Fargo	ton 1100
Peanut, 60% bulk, BE, Alabama	ton 1778
Soybean, unrefined, 44% bulk, Decatur	ton 1778

FATS & OILS

Beef tallow, white, choice, tanks, dried, NY	lb. 8½
Lard, lard, yellow maximum 10%, lbs tanks	lb. 8½
Tallow, medium, fancy, tanks, dried, NY	lb. 12
Tallow, medium, fancy, tanks, dried, NY	lb. 10½
Tallow, medium, plain, tanks, dried, NY	lb. 10

The crude palm oil duty was raised from

farmers are currently forfeiting their soybeans to the government, rather than paying back their loans in cash. This is due to the relatively low value that soy commands on the market today, sources say. When these beans are released, the oil market can be expected to do some softening.

In the meantime, though, the government held beans are occupying valuable space.

PRICES TRENDLINES

WEEK ENDING SEPT. 5, 1986

CHANGES/UP

Cottonseed, 41% bulk, Memphis	\$2.50 per ton
Palm oil, NY, 35c per lb.	
Peanut, 60% bulk, BE	\$20 per ton
Soybean, 44% bulk, Decatur	\$4 per ton
Tallow, inedible, fancy, tanks, dried, NY	10c per lb.
Tallow, inedible, fancy, tanks, dried, NY	10c per lb.

CHANGES/DOWN

Grease, yellow maximum 10%, lbs tanks, Vac. br.	
Lard, lard, bulk tanks, Chicago br.	2c per lb.
Linseed oil, Minneapolis	1c per lb.
Palm oil, NY	10c per lb.
Soybean oil, Decatur	10c per lb.

OILS, FATS INDEX

The Oils, Fats & Wax Index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Sept. 5, 1986	83.87
Aug. 29, 1986	83.08
Aug. 8, 1986	79.18
Sept. 8, 1985	85.82

Chemical Prices Start on Page 36

In Alkenyl Succinic Anhydrides (ASAs)

Regular Alkenyl Anhydride

n-Octenyl Succinic Anhydride
Nonenyl Succinic Anhydride
(Also Specialty Distilled)
Decadienyl Succinic Anhydride
(Also Specialty or Unmodified)
n-Pentadecenyl Succinic Anhydride
n-Hexadecenyl Succinic Anhydride
n-Octadecenyl Succinic Anhydride
iso-Alkenyl Succinic Anhydride Blend
(Undistilled)
n-Octadecenyl Succinic Anhydride
iso-Octadecenyl Succinic Anhydride

Dodecenyl Succinic Acid, Neat
75% Octadecenyl Succinic Acid/25% Oil
50% Octadecenyl Succinic Acid/50% Oil
75% Dodecenyl Succinic Acid/25% Xylene
50% Dodecenyl Succinic Acid/50% xylene
Cetyl 18-50 60
Cetyl 18-50 BD-SSO

HUMPHREY CHEMICAL

North Haven, CT 06473
800-852-3456

Developmental
n-Pentenyl Succinic Anhydride
n-Hexenyl Succinic Anhydride
n-Hexyl Succinic Anhydride
Iso-Hexenyl Succinic Anhydride
Octobutenyl Succinic Anhydride
Iso-Octadecenyl Succinic Anhydride
n-Tricosenyl Succinic Anhydride
Polyisobutylene Succinic Anhydride

• The sky is no limit when you start from the heights of Humphrey quality in these fascinating compounds and their derivatives. We can help you select the proper chain length and degree of linearity desired in the side-chain substituants. Both crude and refined grades are available in 5 gallon containers or tank trucks. Contact us now for even newer anhydrides and acids.

TWX 710-468-2434, TLX 89-4487

WAXES
PARAFFIN · MICRO · BLENDS
LIQUID · SLABS · PELLS



INDUSTRIAL
RAW MATERIALS
CORPORATION

575 Madison Avenue, New York 10022, U.S.A.

Phone: (212) 688-8080 Cable: Inram, New York

RCA Telex 232636 Western Union 12-7004, ITT 426834

LARD OIL

For Finest Quality animal oils
and specialty chemicals call

ANAR 1st 312-953-1660

LARD OIL • ANHYDROUS LARD
REFINERED LARD CLEANSER • LARD & EGGS SOUP • LARD
NEUTRAL SOAPS • Tallow & Vegetable
OILS • MEAT FATTY ACIDATE • BUTYL STEARATE
GLYCERINE • DILIC ACID • AND OTHER FINE PRODUCTS

For compounding and formulating we have the quality industrial oils for

exceptional wetting, lubricity, creas-

ing, for general lubricants, water-repellent

cutting fluids, oil-pressure, boundary

and atomized cylinder lubricants, mold

release agents. Call Anar now

For Bond data on LARD OILS
BOND FREE SAMPLE

• We are interested in other oils such as

Name _____ Tel. _____

Firm _____ Dept. _____

Address _____

City _____ State _____ Zip _____

The universal problem solver: Kemamine fatty amines.

Our Kemamine® fatty amines are useful as anti-static agents, cationic bitumen emulsifiers, chemical intermediates, corrosion inhibitors, dispersing agents, epoxy-resin hardeners, fabric softeners, flocculants, hair conditioners and ore-flotation agents. They're also used as polymeric cross-linking and extender agents, polyurethane-foam catalysts, rubber and plastics intermediates, textile-treatment chemicals and wetting agents.

For technical information and samples, write to:

Humko Chemical Division

Witco Corporation
P.O. Box 125, Memphis, TN 38101-0125

Or call the following sales offices:

Newark 201-344-4647
Melrose Park 312-450-7402
Houston 713-975-5860
Charlotte 704-527-6783

Witco

OILS, FATS & WAXES

ther encouraging Malaysian producers to keep the crude material in the country and refine it for export. In keeping with this trend, the duty on refined oil was lowered 15.04 Malaysian dollars to \$63.62 per ton, equivalent to about \$21 in US currency.

Malaysian production continues to go through the roof, with palm oil stocks in that country expected to reach one million tons by January 1, 1987, according to industry sources.

Pakistan has imposed a heavy import duty on foreign refined palm oil. While Pakistan has raised the import tax on all vegetable oils to 3,000 rupees, it has raised the palm oil duty an additional 3,000 rupees on top of that. Buyers who can demonstrate that less than 65 percent of their oil needs are being filled by palm oil will receive a rebate of 3,000 rupees. The move comes as part of an effort to boost sales of Pakistan's domestic oils, mostly cottonseed oil.

In the US, spot trading has been stagnant, according to industry sources. Consumers have been taking advantage of low prices on palm oil by buying as far forward as 1988. Malaysian production, now at a seasonal peak, should insure continued low prices for the future, sources say.

SAFFLOWERSEED OIL — West Coast traders are seeing active buying and selling as the new crop oil begins to hit the market. Buyers who abstained from the market in July and August, allowing their stocks to dwindle, are the cause of a "fairly good rush," according to an industry source. This is resulting in "pretty heavy buying commitments" on the nearby positions of the new oil, he says.

The tight supply situation of the Summer months has not evaporated yet. The backlog of orders is preventing stocks from building at the moment. It is not expected that significant supplies will accumulate for another one or two months, a source says.

Traders in the Dakotas and Montana are hoping for a similar rush to occur in the next couple of weeks when their new crop oil will begin to enter the market.

LARD — Lard prices have gradually been working their way down over the past few weeks. Overproduction due to a "good hog kill" is keeping the market soft, according to an industry source.

FATTY ACIDS — TALL OIL — Tall oil fatty acid (TOFA) production in July was down compared to the output during June.

July's production on 2 percent and over resin content fatty acids was 8,500 tons, down

19.7 percent from June's level of 10,900 tons, according to Pulp Chemicals Association figures.

For the less than 2 percent resin content TOFA, July production was 7,900 tons, representing a 10.3 percent fall from the 8,900 ton output of the month before.

Chemical Blaze Forces Evacuation

Approximately 1,000 residents of Elkhart County, Ind., were evacuated for several hours last week after a fire broke out there in a chemical warehouse containing drums of acetone, dichloromethane and other materials. Preliminary tests indicated that smoke from the blaze did not pose a health threat.

Firefighters in Elkhart were advised by Chemtree to let the fire burn out, because dousing the fire could contaminate the groundwater. Chemtree is the information clearing house on hazardous materials formed by Chemical Manufacturers Association.

DMT Correction

The Chemical Profile of August 25, page 50, incorrectly listed the location of an Eastman Chemical Products Inc. dimethyl terephthalate plant as Wilmington, N. C. The correct location is Kingsport, Tenn.

SYNTHETIC SPERMACETI

SYNACETI 116®
NF/USP

Low Peroxide Value
Excellent Stability
No trace-metal catalysts

Cosmetics • Varnishes
Inks • Pencils • Plastics
Pharmaceuticals

WERNER G. SMITH INC.
1730 TRAIN AVE., CLEVELAND, OHIO
44113

Phone: 216-861-3676

CHLOROBENZENES

Paradichlorobenzene

MONOCHLOROBENZENE • ORTHODICHLOROBENZENE
(HIGH PURITY AND TECHNICAL GRADES)

1,2,4 TRICHLOROBENZENE
(PURE AND ELECTRICAL GRADES)

TETRACHLOROBENZENES
MURIATIC ACID 20° & 22° Be

1,2,3 TRICHLOROBENZENE

Standard Chlorine Chemical Co., Inc.
1035 Belleville Turnpike, Kearny, NJ. 07032 • Tel. (201) 997-1700 Telex 139345

Hydriodic Acid

From Stock

WHITE
CHEMICAL
CORPORATION

PO. BOX 2500 NEWARK, NJ 07114
TELEPHONE 201-621-4100 TELEX 644191
OUTSIDE NJ CALL TOLL FREE 1-800-225-4226

AROMATIC ORGANICS

TDI Market Turns Upward; Makers Say Pricing Steadies

Producers of toluene di-isocyanate (TDI) say that strong export interest, fair domestic demand, and rising feedstock costs have stabilized the market this quarter.

An industrywide price increase during the first half of the year was only partially successful. During the past two months, however, producers are in agreement that discount levels off the list level of \$1.01 per pound have held steady.

Weakness in feedstock tolueene pricing was seen as a contributing factor to producers' difficulty in raising prices earlier in the year. But since July 1, tolueene has turned around from a 81c. to 84c. per gallon price range to a 70c. to 72c. per gallon level.

While most TDI producers say that an effort will likely be made to raise prices for the first quarter of next year should tolueene pricing stay firm, one producer says that because such a small amount of this year's price increase actually went through, "the industry really needs a (first quarter of 1987) price increase almost irrespective of what happens with tolueene." It is estimated that tolueene accounts for about 20 percent of production costs.

Producers say that market conditions, tighter than early in the year, could well support a price increase in 1987.

"Supply and demand are precariously near balance," says one producer, and another comments that "we are (producing) full out, and from what we gather, the competition is also." Two competitors estimate an industry-wide operating rate of 93 percent for the year.

STRONG EXPORT BUSINESS

Export business is said to be playing a significant role in the market. Through July, exports were running about 500,000 pounds, or 45 percent, higher than the 1985 average.

The Middle East and Oceania are sold to be showing strong demand for US material.

Brazil,

which in the past has shipped MDI to

the US, has become a net buyer of US product

as its production has been unable to keep up

with strong growth in demand there.

Producers point out that export prices

have been moving up steadily in recent

months and presently are virtually equal to

domestic pricing.

The US dollar ex-

pected to continue weakening, this trend

should continue, producers say.

One TDI producer observes that the mar-

ket has tightened up to such an extent that

he tried to buy material recently for

trouble to cover overseas commitments, he

was unable to obtain it. Another producer

says that, during a maintenance turnaround

last month, he "went around trying to borrow

some (product) and couldn't get any."

It is said that domestic demand from the

furniture sector, a major end market, has

picked up in recent months in a seasonal

pattern of a three to six month lag behind

from the plastics and rubber sectors during the second half of 1986 will show an improvement over that period last year.

However, long-term demand for BHT "will be flat or decrease somewhat the next few years," the producer comments. The trend in the industry is said to be towards less volatile, higher molecular weight phenolic antioxidants and phosphites.

BTX — The firming trend in basic aromatics pricing "is still rolling right along," says a trader, as strength in crude oil pricing is felt in the market. In addition to "confidence in the OPEC agreement," adds another market participant, strong European octane demand is pushing tolueene pricing upwards.

Producers point out that export prices

have been moving up steadily in recent

months and presently are virtually equal to

domestic pricing.

The US dollar ex-

pected to continue weakening, this trend

should continue, producers say.

One TDI producer observes that the mar-

ket has tightened up to such an extent that

he tried to buy material recently for

trouble to cover overseas commitments, he

was unable to obtain it. Another producer

says that, during a maintenance turnaround

last month, he "went around trying to borrow

some (product) and couldn't get any."

It is said that domestic demand from the

furniture sector, a major end market, has

picked up in recent months in a seasonal

pattern of a three to six month lag behind

from the plastics and rubber sectors during the second half of 1986 will show an improvement over that period last year.

However, long-term demand for BHT "will be flat or decrease somewhat the next few years," the producer comments. The trend in the industry is said to be towards less volatile, higher molecular weight phenolic antioxidants and phosphites.

BTX — The firming trend in basic aromatics pricing "is still rolling right along," says a trader, as strength in crude oil pricing is felt in the market. In addition to "confidence in the OPEC agreement," adds another market participant, strong European octane demand is pushing tolueene pricing upwards.

Producers point out that export prices

have been moving up steadily in recent

months and presently are virtually equal to

domestic pricing.

The US dollar ex-

pected to continue weakening, this trend

should continue, producers say.

One TDI producer observes that the mar-

ket has tightened up to such an extent that

he tried to buy material recently for

trouble to cover overseas commitments, he

was unable to obtain it. Another producer

says that, during a maintenance turnaround

last month, he "went around trying to borrow

some (product) and couldn't get any."

It is said that domestic demand from the

furniture sector, a major end market, has

picked up in recent months in a seasonal

pattern of a three to six month lag behind

from the plastics and rubber sectors during the second half of 1986 will show an improvement over that period last year.

However, long-term demand for BHT "will be flat or decrease somewhat the next few years," the producer comments. The trend in the industry is said to be towards less volatile, higher molecular weight phenolic antioxidants and phosphites.

BTX — The firming trend in basic aromatics pricing "is still rolling right along," says a trader, as strength in crude oil pricing is felt in the market. In addition to "confidence in the OPEC agreement," adds another market participant, strong European octane demand is pushing tolueene pricing upwards.

Producers point out that export prices

have been moving up steadily in recent

months and presently are virtually equal to

domestic pricing.

The US dollar ex-

pected to continue weakening, this trend

should continue, producers say.

One TDI producer observes that the mar-

ket has tightened up to such an extent that

he tried to buy material recently for

trouble to cover overseas commitments, he

was unable to obtain it. Another producer

says that, during a maintenance turnaround

last month, he "went around trying to borrow

some (product) and couldn't get any."

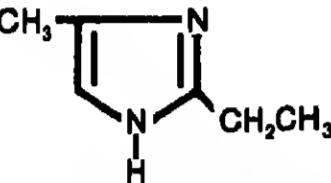
It is said that domestic demand from the

furniture sector, a major end market, has

picked up in recent months in a seasonal

pattern of a three to six month lag behind

poly ORGANIX



2-ETHYL-4-METHYLMIDAZOLE

- Manufactured in the U.S.A.
- Available in 5-gallon drums.
- Guaranteed to remain liquid.

Please call... the price will be to your liking!

poly organix, Inc.
(503) 928-2628
commercial chemical department
1290 industrial way • p.o. box 803
albany, oregon u.s.a. 97321

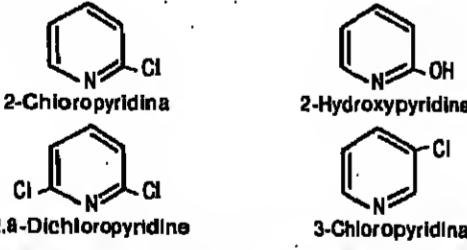
Rutgers

Ruetgers-Nease Chemical Co., Inc.

A SUBSIDIARY OF RÜTGERSWERKE AG, ONE OF EUROPE'S LEADING MANUFACTURERS OF COAL-BASED AROMATICS

PRESENTS:

SUBSTITUTED PYRIDINES



BASIC AROMATIC CHEMICALS ORGANIC INTERMEDIATES

CALL OR WRITE FOR OUR BROCHURES
"PURE AROMATIC PRODUCTS" OR "ORGANIC INTERMEDIATES"

Ruetgers-Nease

201 Struble Road
Seta College, Pennsylvania 16801
(814) 238-2424
TWX #6106703533

YOUR RELIABLE SOURCE FOR ORGANIC CHEMICALS

AROMATICS

However, lead phasing down in Europe has created "a vacuum sucking in octane" from the US, South America, and the Far East, one industry source comments.

With this strong toluene demand, the differential between benzene and toluene pricing remains narrow. As a result, hydrodealkylation is not economical for those who otherwise buy benzene on the merchant market.

Operational difficulties at Standard Oil's Alliance, La. facility have contributed to the snug market conditions, sources note. Basic aromatics production was reamed last week, a company spokesman says, but "we would like to have had it (running) two months ago." Mechanical problems with both the refinery and the aromatics unit are cited.

It is widely believed that Exxon Chemical Americans and Shell Chemical, both currently posting an 8c. per gallon benzene contract level, will join Standard Oil's 8c. per gallon level at mid-month.

Standard Oil's decision to raise pricing to 8c. September 1 was based in part on a distillation for bimonthly price adjustments, says a company spokesman. "We have established a position," he says, and "have been getting pats on the back" from styrene producers who raised their prices 3c. per pound at the first of the month.

PARA-CRESOL — Biddle Sawyer Corporation, a distributor for Synthetic Chemicals Limited at the UK, says it is raising its price in bulk quantities to 8c. per pound, effective October 1. The change is attributed to increased manufacturing costs.

Another supplier who is studying the move says that prices have been at depressed levels for some time due to oversupply. BHT production, the main outlet for para-cresol, is expected to increase only slightly in the coming years if at all. Nonetheless, BHT pricing has been firm recently.

STYRENE — It was mistakenly reported last month (CMR, 8/25/88 pg. 13) that "Cos-Mar, Inc. will eliminate a 3-cent-per-pound temporary voluntary allowance off its 24 cent per pound posting." The price change was made by Cosden Oil & Chemical Company, a joint owner with Borg-Warner Chemicals, Inc. of Cosmar Company, a 50-50 facility devoted to manufacturing only. Cos-Mar, Inc. is the holding company. Borg-Warner increased its pricing by 3c. per pound across-the-board September 1.

Burmah Buys Adhesives Firm

Burmah Specialty Chemicals, a Swindon, England division of The Burmah Oil plc, last week said it acquired Columbia Cement Company, a New York-based producer of adhesives, with assets approaching \$25 million.

Commenting on the purchase, Jonathan Fry, chief executive of Burmah Specialty Chemicals said, "Columbia is a market leader in the US, and provides an excellent base for further expansion in the growing American adhesives market."

"We are delighted to announce that Howard Maisel, the current president of Columbia Cement, will remain with us as head of Burmah Specialty Chemicals' Adhesive Division in the US, and the Americas. Mr. Maisel will play a key role in a worldwide expansion program for Burmah Adhesive."

BURMAH ADDS RESOURCES
Mr. Maisel, commenting on the purchase, said, "Our joining Burmah Specialty Chemicals will provide us additional resources to expand. We look forward to helping Burmah become a force in adhesives in the US and eventually in the global adhesives marketplace."

The purchase of Columbia Cement represents the first Burmah Specialty Chemicals adhesives acquisition in the US.

Other units of Burmah Specialty Chemicals with US operations include the Coatings Division and Water Management Division.

Additional Burmah Specialty Chemicals US acquisitions completed within the last year include Yates Manufacturing, a producer of investment casting waxes; National Wax Company, which manufactures a wide variety of wax compounds; and Burmah Technical Services, formerly the water management operations of Clow Corporation.

Burmah is an international corporation focused on the marketing of oil and chemical products.

In addition to Burmah Specialty Chemicals, the corporation manufactures and markets of industrial and automotive lubricants under the Castrol brand, and is transporter for the world's largest liquefied natural gas project from Indonesia to Japan.

ALIPHATIC ORGANICS

Propylene Market Seen Firming As Feedstock Costs Advance

due to heavy competition from oil products, ethane is in short supply for the near term.

Propane, at 22 1/4 cents per gallon last week, down from 26 cents per gallon in early June, may be favored by some companies right now.

"There should be more emphasis on propane with ethane production come up," says one analyst. However, propane product streams are rich in propylene and would exacerbate the C₃ oversupply situation.

Whatever the economics of lighter feeds are now, crackers that can handle gas oil

PRICES TRENDLINES

WEEK ENDING SEPT. 5, 1988

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics Index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Sept. 5, 1988 222.80
Aug. 29, 1988 222.80
Aug. 8, 1988 222.80
Sept. 8, 1985 203.80

Chemical Prices Start on Page 36

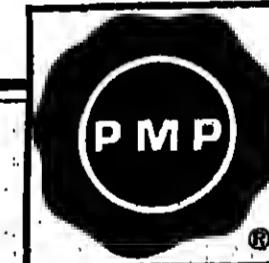
WHEN YOU NEED MORPHOLINES... COME TO US

Morpholine
N-Methylmorpholine
N-Ethylmorpholine
Aminopropylmorpholine

Atlanta (404) 321-4411
Chicago (312) 920-3685
Cleveland (216) 752-5100
Houston (713) 520-3628
Los Angeles (714) 898-9278
New York (914) 253-7861
London 44-1-584-5000
Toronto (416) 441-7761
U.S. Distributor Sales (713) 432-3866

Texaco Chemical Company

102-1075



World Leading Producer

PMP Sodium Gluconate F.C.C.

99.5% purity; free-flowing crystals.
Meets F.C.C. specifications.

PMP Liquid Gluconate 60

Stabilized; noncrystallizing.

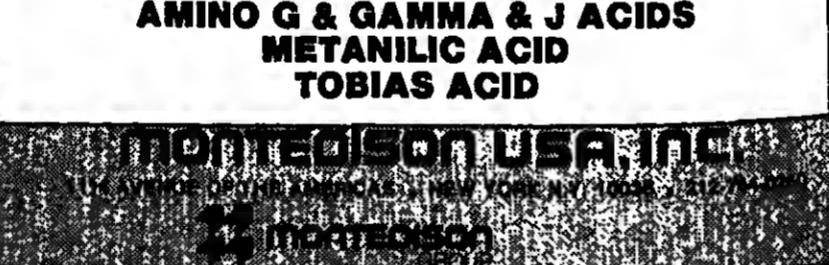
PMP 50% Gluconic Acid

PMP Glucono Delta Lactone F.C.C.

A U.S. Company of Fujisawa Group

PMP FERMENTATION PRODUCTS, INC.
7670 N. Port Washington Road • Milwaukee, Wisconsin 53217
(414) 362-3001 • To order, call (800) 556-1031 • Telex: 240446

BETANAPHTHOL & BONA & G SALT
AMINO G & GAMMA & J ACIDS
METANILIC ACID
TOBIAS ACID



EKA AB. S-445 01 SURTE, Sweden

BENZYL ALCOHOL

Please contact exclusive USA distributors:

biddle sawyer CORPORATION

2 Penn Plaza, New York, NY 10121 • (212) 736-1580

PRICE HIGHLIGHTS

ALIPHATICS IN AUGUST

	AUG.	JULY
Butane	12 1/2	13
Ethylene	13 1/2	13 1/2
Ethylene Glycol	16 1/2	17 1/2
Methanol	29	30
Propylene	61 1/2	63 1/2
Vinyl Chloride	15	15

ACETIC ACID — Cetanese Chemical Company Inc. says that it will increase the market price of its acetic acid by 1 cent per



BP Chemicals Americas Inc.

Your Source For:

- Acetic Acid, Glacial
- Butyl Acetate
- Formic Acid
- Ethyl Acetate
- Propionic Acid
- Isophorone
- Vinyl Acetate Monomer
- Oxysoyle 80 (MEK Replacement)
- Polybutenes
- Cellulose HEC
- Polyethylene Glycols
- White Gold HEC
- Polyalkylene Glycols
- HEMA, HPMA
- Diethyl Phthalate

For additional information regarding these products as well as others, please contact
BP Chemicals Americas at 800-BPCHEM.
In New York State call 914-921-0420.

BP Chemicals Americas Inc.

411 Theodore Fremd Avenue
Rye, NY 10580

You'll profit from the partnership

It's pure fact you can trust GPC ethyl alcohol in the most demanding applications.

We apply more than 30 years' experience and expertise to make our 190 and 200 proof benzene-free ethyl alcohols the finest quality available. That's why you can depend on GPC whether you need pure ethyl alcohols, specially denatured alcohols, special industrial and proprietary solvents, or duplicating fluids. In fact, we make ethyl alcohol in every approved formulation.

Our complete range of ethyl alcohol products expands the realm of applied chemistry—both in your current products and new product development. GPC fermentation ethyl alcohol

is already the leading successor to synthetic alcohol. Our anhydrous ethyl alcohol is fast becoming the common-sense alternative to 99 percent isopropyl alcohol as well.

You can depend on GPC ethyl alcohol to be there when you need it—today and tomorrow. That's because GPC ethyl alcohol is produced by fermentation from abundant, renewable Iowa corn. You get fast delivery—from a drum to a barge load—through our nationwide distribution network.

When you need the finest ethyl alcohol, come to GPC. Call or write today: Grain Processing Corporation, 1600 Oregon Street, Muscatine, IA 52761, 319 264-4265.

GPC ethyl alcohol: pure and applied chemistry.



ALIPHATICS

bound for shipment after October 1.

Celcoese would not comment on current market prices. Market levels during the second quarter were reported at 23 1/4 cents per pound.

BUTADIENE — Corpus Christi Petrochemical Company and El Paso Products company said last week that the Corpus Christi has acquired El Paso's 210-million-pound-per year butadiene facility in Corpus Christi, Tex. The purchase price has not been disclosed.

The agreement became effective on September 1. Last week it was also agreed that Corpus Christi will sell all of its butadiene output from the facility to Shell. According to a Corpus Christi spokesman "Shell will be the seller now instead of El Paso."

Corpus Christi has an olefins complex adjacent to the El Paso site and has been the principal supplier of raw materials to the facility. This acquisition "gives us improved integration at our olefins cracker complex," says the spokesman. The company is also expecting to "reduce fixed costs" with the purchase.

Corpus Christi is a joint venture of ICI America Inc., Champkin Petroleum and Solvay America.

ETHYLENE GLYCOL — Prices during August and early September, for industrial antifreeze grade ethylene glycol, f.o.b. Gulf Coast locations in barge loads, reached 18c. to 18 1/4c. per pound. This is down by 1/4c. to 1c. per pound from July levels.

Softening values have been exacerbated by the reluctance of antifreeze retailers and distributors to commit themselves to product in August, the early part of the antifreeze buying season. "When prices are declining, retail buyers don't stock up; there is a good chance that future costs will be lower," says one EC producer.

This all adds up to a late start for the antifreeze season with a probable crunch coming in late October or early November when consumer buying picks up. Suppliers report that sales have started to accelerate in

September and prices reached in August should remain firm through the season.

In fact, prices may see some gains if ethylene prices move up by 1c. per pound. Celcoese makers are hoping.

Production of ethylene glycol for the first six months of the year, according to US International Trade Commission, reached 1.1 billion pounds, a 5 percent increase over levels reached last year. Sources attribute the increase to a combination of fewer operating problems this year and increased demand in the relatively small, but fast growing, PET resin market. While PET resin for bottle command only about 10 percent of the US ethylene glycol end uses, its growth is pegged as high as 15 percent per year.

VINYL ACETATE MONOMER — Celanese Chemical Company says it will increase the worldwide market price of vinyl acetate monomer by 2 cents per pound for all shipments after October 1. Celanese would not comment on current market prices.

August prices for VAM, following some slippage since January, were reported between 28 to 30 cents per pound, delivered to medium-sized accounts.

PPG Industries

Continued from Page 9

vegetables and ornamentals, "Sprout No. 1" potato sprout inhibitor, and the older "Cob Hoe" and "Furloc" brand herbicides.

The company has applied for and is expecting Fedcrot registration of "Cobra" post-emergence herbicide in time for the 1981 growing season. US soybean grower field "Cobra" herbicide have demonstrated a high level of effectiveness against more than 20 broadleaf weeds. Also, the new herbicide is being used successfully in Brazil, the Western Hemisphere's second largest soybean producing country.

In addition, it is being evaluated for pre-emergence, early post-emergence and sequential treatments for weed control at peanuts and for post-directed weed control on cotton. It has not been cleared via Experimental Use Permit for these crops.

RESIDUE LEVELS LOW

Dr. Jack Moore, EPA assistant administrator for pesticide and toxic substances, says "The residue levels of dinoseb in crops are extremely low compared to the levels which cause birth defects in test animals. Hence, we do not believe that eating products from dinoseb-treated fields presents a concern. However, direct exposure to workers in the field as a result of application should be avoided."

Food and Drug Administration tested for residues of dinoseb in 70 products in 1985 and 1986. These included peanuts, sweet, red and white potatoes from three areas of the country, and other crops. No dinoseb levels were detected except in cotton seed meal. The detection meal levels were 0.02 parts per million—a fifth of the allowable residue level.

Dinoseb is highly toxic to humans by exposure through the skin as well as inhalation and label directions require protective clothing for applicators. If it is applied by either ground equipment, airplanes or hand held spray guns.

There are approximately 180 registered products containing dinoseb (or its four salts) as an active ingredient. Between 7 and 11 million pounds of dinoseb-active ingredient are annually sprayed as a liquid from airplanes, tractor-drawn equipment and handheld equipment. As much as 25 percent of this pesticide can be used in fall and winter. Dinoseb is also used as a desiccant to dry growing vegetation before harvest, as a fungicide and as an insecticide.

The major use sites by volume include soybeans (40 percent), cotton (15 percent), potatoes (16 percent), peanuts (9 percent), alfalfa (4 percent), snap beans (2 percent), peas (2 percent), grapes (2 percent), and almonds (1 percent).

Other use sites include clovers, flax, barley, oats, rye, wheat, apples, apricots, cherries, citrus, dates, figs, nectarines, olives, peaches, plums, berries, pecans, walnuts, blackberries, blueberries, boysenberries, gooseberries, loganberries, raspberries, strawberries, cucumbers, pumpkins, squash, currants, lime and kidney beans, onions, garlic, hops, ornamentals, cone-bearing trees, right-of-ways, and aquatic drainage ditches.

The agency's action is based upon studies which EPA recently received indicating that dinoseb caused birth defects in laboratory animals. The effects were associated with exposure during pregnancy.

Defects include irreversible neurological and skeletal malformations in the offspring of animals exposed to the chemical.

The available evidence shows that eating foods from dinoseb-treated fields does not pose a concern," Mr. Barnes adds. "The dangerous routes of exposure are inhalation and skin absorption by people applying the pesticide in the field."

The agency has also received other studies showing that dinoseb causes fertility effects in males and mice. While EPA's primary concern is for women, because of the sterility studies the agency is recommending that all persons working with dinoseb take precautions from direct exposure associated with the application of the pesticide.

Did You Know That Last Year's U.S. Savings Bonds Average Rate Exceeded 9%?

Many Americans are surprised when they hear all that U.S. Savings Bonds have to offer. Today's Bonds give you market-based interest rates—like the money markets—plus a guaranteed return. So you can earn a lot more than the guaranteed minimum rate of 7 1/2%, never less!

To earn the higher rates, just hold your Bonds five years or longer.

What's more, Bonds give you big tax advantages, cost as little as \$25 and are easy to buy. You can purchase them at most banks and savings and loans, or through the Payroll Savings Plan.

For more surprising news, call toll-free 1-800-US-BONDS.

U.S. SAVINGS BONDS

Paying Better Than Ever

Market-based rates apply to Bonds purchased on and after 11/1/82 and held at least five years. Bonds purchased before 11/1/82 earn market-based rates when held beyond 10/31/87. Bonds held less than five years earn lower rates.

A public service of this publication.

Dinoseb Draws Warning

Continued from Page 5

prize regulatory action very soon," says A. James Barnes, EPA deputy administrator.

Exposure to dinoseb during its application and workflow in fields shortly after the application of this product are the particular agency concerns. Care should also be taken in handling or laundering contaminated clothing, the agency says.

The agency's action is based upon studies which EPA recently received indicating that dinoseb caused birth defects in laboratory animals. The effects were associated with exposure during pregnancy.

Defects include irreversible neurological and skeletal malformations in the offspring of animals exposed to the chemical.

The available evidence shows that eating foods from dinoseb-treated fields does not pose a concern," Mr. Barnes adds. "The dangerous routes of exposure are inhalation and skin absorption by people applying the pesticide in the field."

The agency has also received other studies showing that dinoseb causes fertility effects in males and mice. While EPA's primary concern is for women, because of the sterility studies the agency is recommending that all persons working with dinoseb take precautions from direct exposure associated with the application of the pesticide.

Unsurpassed purity

We produce Formic Acid because we want it—not as a by-product. As a result, it contains virtually no other acids or undesirable by-products. So whether you use it as an acidulant or an intermediate, you get what you want—Formic Acid.

A sure source—a steady source

The BASF Team is ready to supply your needs from either of two bulk storage locations, in the Southeast or the Northeast.

For details, technical data or samples, call or write Intermediate Chemicals customer service.

BASF Corporation
Chemical Division
100 Cherry Hill Road
Parsippany, NJ 07054-9985
(800) 526-1072

Intermediate and Fina Chemicals

BASF Intermediates



Now! A major source. A reliable source.

From the largest,
most advanced plant in the world.

The BASF Intermediates Team is your direct line to the world's most advanced plant dedicated solely to Formic Acid production. Our 220,000,000 pound capacity lets us supply the whole market and we can serve you with Formic Acid in a range of strengths and deliver it when you want it.

Unsurpassed purity

We produce Formic Acid because we want it—not as a by-product. As a result, it contains virtually no other acids or undesirable by-products. So whether you use it as an acidulant or an intermediate, you get what you want—Formic Acid.

A sure source—a steady source

The BASF Team is ready to supply your needs from either of two bulk storage locations, in the Southeast or the Northeast.

For details, technical data or samples, call or write Intermediate Chemicals customer service.

BASF

CHEMICAL PROFILES

Tell you about chemical process materials. Contact Services Department, Schnell Publishing Co., 100 Church St., New York, N.Y. 10007.

AT YOUR SERVICE

With Union Carbide Vinyl Acetate Acrylic Acid Acrylates

UNION
CARBIDE

CHEMPAX
DISTRIBUTION/MANUFACTURING SOFTWARE
THE SOLUTION TO THE
CHEMICAL INDUSTRY'S PROBLEMS

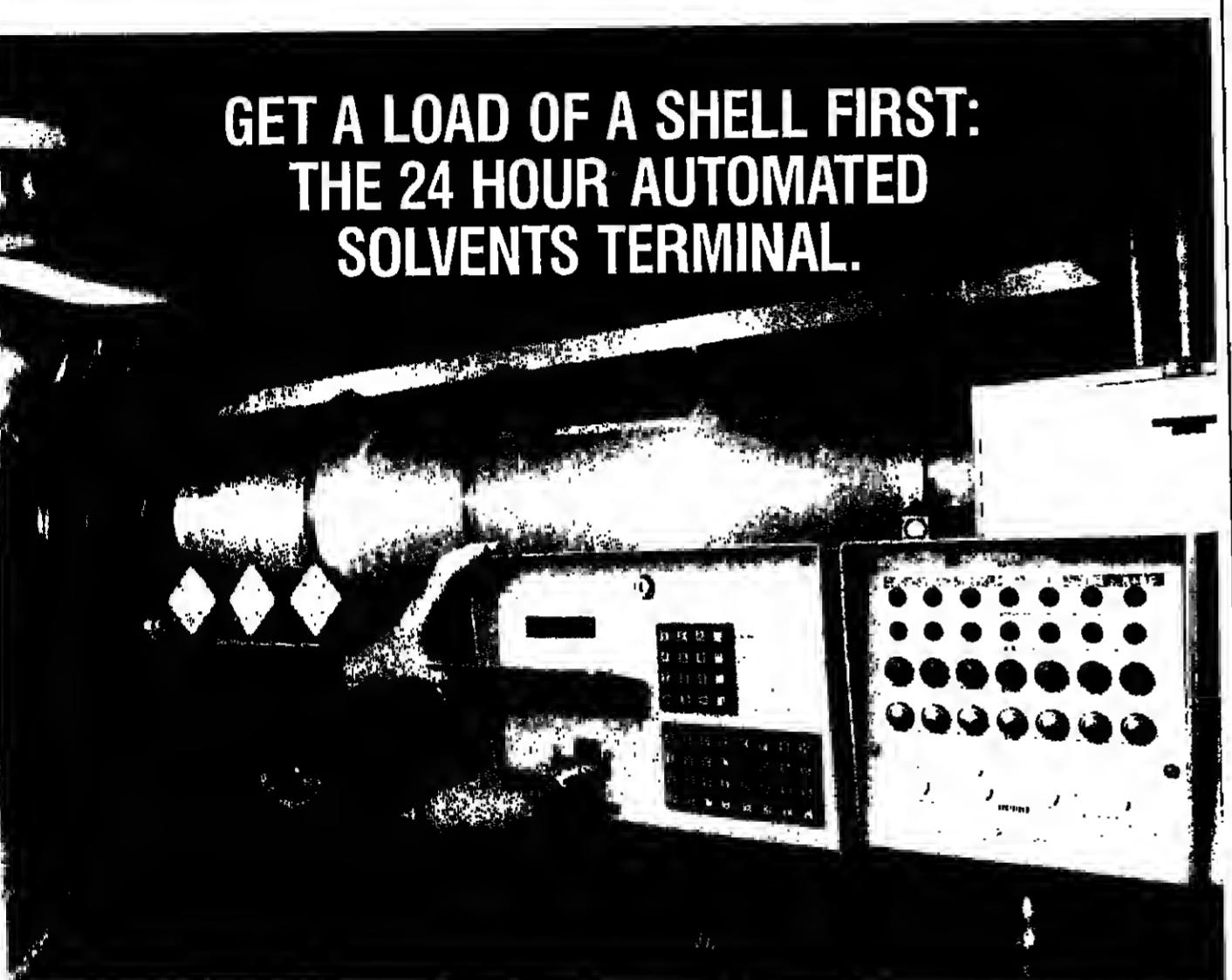
- ORDER PROCESSING
- TELEMARKETING
- PURCHASING
- MANUFACTURING
- SALES SUPPORT AND ANALYSIS
- GOVERNMENT REGULATIONS
- ACCOUNTS RECEIVABLE
- ACCOUNTS PAYABLE
- INVENTORY CONTROL
- GENERAL LEDGER

CHEMPAX - THE ONLY SOFTWARE PACKAGE SPECIFICALLY
DESIGNED FOR CHEMICAL MANUFACTURERS AND DISTRIBUTORS.
MAKE US PROVE IT. FOR FREE INFORMATION KIT, WRITE OR CALL.

DATACOR, INC.

2 SHUNPIKE ROAD, MADISON, NJ. 07940/(201) 822-1551

GET A LOAD OF A SHELL FIRST: THE 24 HOUR AUTOMATED SOLVENTS TERMINAL.



It's the height of convenience.

Now you can schedule pick up of hydrocarbon and oxygenated solvents any time of the night or day, 365 days a year.

Where? From Shell's Dominguez Solvents Terminal in Carson, California.

It's equipped with a state-of-the-art automated, computerized loading system that dispenses a complete line of certified, on-spec solvents—safely and efficiently whenever you need them. This helps to improve your vehicle utilization, shorten turnaround time and increase scheduling flexibility.

How does it work? To make sure that all those using this new service know how to operate the

equipment, Shell will train your drivers and issue them an authorization number. After your order has been placed with our Anaheim Order Center, your driver's authorization number will allow easy access to the most convenient supply of quality solvents.

The next time you need solvents—get a load from Shell—any time, day or night.

For more information about the Shell 24 hour self-serve solvents station call one of the phone numbers listed below. Los Angeles (213) 585-0660; rest of California 1-800-422-4202; other western states 1-800-854-3857; in the rest of the United States call 1-800-447-4355.



Cyanamid

Continued from Page 3

pressed interest in modulated windows, in which the glass panes are encapsulated into RIM frames away from the assembly line. The RIM can be impregnated with aliphatic isocyanates to add light stability to the frame, enabling it to retain its original color without repainting. To date though, the Mobay official points out that very little aliphatic isocyanates have been employed in RIM applications.

The Cyanamid announcement marks the second major aliphatic isocyanate capacity increase started in six weeks. At the end of July Mobay said it was implementing a 25-percent expansion of its HDI polyisocyanate capacity at Baytown in order to "keep pace with the growing demand from the paint industry." The expansion is due on line in mid-1987. At the time Mobay said supplies of HDI-based polyisocyanates had grown tight, mainly because of increasing demand for

high performance polyurethane coatings. The market is expected to further grow, Muhay says, because of active development projects in markets such as new auto body coats, maintenance coatings, wood, coil, and roof coatings and heavy industrial coatings.

Cyanamid says production facilities for the meta-TMXDI and meta-TMI will be completed in 1987. Later on, the company says, will begin producing para versions of the two compounds. The production route marks first commercial attempt to produce isocyanates without phosgene since Arco abandoned an effort to make MDI without phosgene several years ago.

Membrane Gas

Continued from Page 7

are carbon, but in radically different form," Dr. Nurayyan said.

The first applications of the new membrane will be for separating nitrogen from air, according to Earl Beaver, director of business development for Permecon. Permecon has sold more than a dozen nitrogen plants since 1983 based on "Prism" separation membrane gas separators introduced by Monsanto in 1979. These nitrogen plants have been primarily for inert blasting ships and offshore oil platforms.

Dr. Beaver says the new systems, called "Prism Alpha" nitrogen systems, will be three times more efficient than current ones.

The market for nitrogen in the United States during 1986 is estimated at nearly \$1 billion. Dr. Beaver says the new systems will be fabricated in a broad range of sizes and configurations to meet virtually every given need.

The nitrogen systems will be introduced commercially for a series of applications over the next four months. Several prototype and test systems have already been installed in a variety of industries, Dr. Beaver says.

Need a
Quick Study?
Chemical Profiles

ORGANICS TECHNOLOGIES, INC. MATERIALS LIQUIDATION'	
Cat #	Quat Avail
0901	acetoxy acetone 700 kg
1011	4-amino urea .100K
1012	urea .80K
1024	4,5-dimino urea .100K
1025	4,6-dihydroxy pyrimidine .25K
1037	2-mercapto- 4,5,8-triamino- pyrimidine .100K
1040	urea-5-carboxylic acid .15K
1052	cytosine .5%
3001	adenine .30K
3005	guanine hydro- chloride .20K
3008	guanine .50K
5001	benzimidazole .50K
5008	n-benzyl-2-methyl- imidazole .50K
8024	maleic acid .120K
9021	diamide .25K
9016	formamide acetate .20K
9017	meltonic acid .80K
9018	diamide .20K

Call for white samples
availability at
(503) 222-1074
or write: P.O. Box 200
Albany, OR 97321
Some items are
available in
commercial quantities.

Cetus Forms New Company To Enter European Market

Cetus Corporation announced that it will form a wholly-owned subsidiary to develop, manufacture and directly market the company's therapeutic products in Europe.

"We believe that directly marketing these products ourselves in Europe is the approach that will achieve the most successful entry and the best financial return for our stockholders," says Robert A. Flides, president and chief executive officer.

The products which will be the initial focus of the subsidiary, called EuroCetus, are interleukin-2, tumor necrosis factor, colony stimulating factor-1, human monoclonal antibodies for neutralizing endotoxins produced by Gram-negative bacteria, and immunotoxins for breast and ovarian cancer.

"These products are either in human clinical trials or late stage preclinical testing in the US," says Mr. Flides. "Therefore, our entry is well-timed because the products are at the optimal transfer stage, ready to enter European trials guided by the data and knowledge gained in the American studies. Over the longer term we expect therapeutic products to flow from Cetus to EuroCetus and vice versa."

"We have selected the first clinical study sites and will be initiating human trials of interleukin-2 in Europe by early 1987," Mr. Flides adds. "Also, we have evaluated several locations for a development and production facility and hope to announce our site decision in the near future."

Cetus' therapeutic products are expected to be approved initially for cancer indications.

The European cancer market is currently slightly larger than its US counterpart, with sales of approximately \$460 million. There were 1 million cancer deaths in Europe in 1984, and in 1985 over 4.8 million Europeans were under treatment or supervision for the disease.

Since the expansion into Europe involves costs that are incremental to Cetus' US operations, Cetus management said the move would require additional capital, despite the company's strong financial position.

"We expect to file shortly with the SEC a public offering of a \$75 million research and development partnership to fund our European activities," says Mr. Flides.

Cetus is primarily engaged in the development, manufacturing and marketing of therapeutic products initially targeted at cancers and serious infectious diseases. In addition, the company has exclusive business relationships with major corporations in human diagnostics, agriculture, animal healthcare, industrial process and instrumentation for research and industrial users of biotechnology.

Neste Oy to Add Two Process Units

UOP Inc., a unit of Allied-Signal Inc., and Neste Oy of Finland have announced the commissioning of two UOP continuous catalyst regeneration plating units in Nasnall and Porvoo, Finland.

The new UOP CCR plating unit installed at Neste Oy's Naantali refinery is currently converting 7,100 BPSD of naphtha into high value gasoline blending components. The CCR plating unit at Porvoo is designed to process 38,300 BPSD of naphtha feedstock.

The Porvoo unit, which came on stream in July 1986, is a revamp and upgrade of an existing semi-regenerative reforming unit to a UOP CCR plating process unit with attached reactors. The Naantali unit came on stream in December 1985.

ORGANIC FLUOROCOMPOUNDS FOR CHEMICAL INDUSTRY

TRIFLUOROACETIC ACID
TRIFLUOROACETYL CHLORIDE
POTASSIUM TRIFLUOROACETATE
SODIUM TRIFLUOROACETATE

available in commercial quantities, high purity

TRIFLUORO ETHANOL
TRIFLUOROACETIC ANHYDRIDE
TRIFLUOROACETIC ACID METHYLESTER
TRIFLUOROACETIC ACID ETHYLESTER

MANUFACTURED BY

KALI-CHEMIE

PLEASE INQUIRE ALSO ABOUT ADDITIONAL COMPOUNDS

CONTACT

KALI-CHEMIE CORPORATION

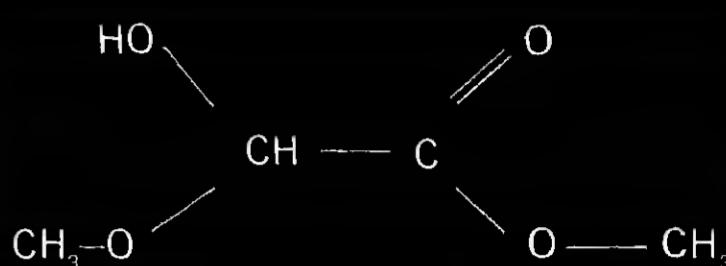
41 WEST PUTNAM AVE.

GREENWICH, CT 06830 • (203) 629-7800

Hoechst High Chem

A VERSATILE INTERMEDIATE :

2 - METHOXY 2 - HYDROXY ACETIC ACID METHYL ESTER



from Société Française Hoechst

For further information in the US please contact :

Société Française Hoechst
Tour Roussel Hoechst Cadax 3
92080 PARIS
LA DEFENSE / FRANCE
TEL : (33-1) 47.67.43.06
TELEX : NHOEC A 620537F

American Hoechst Corporation
Chemicals Department
Route 202-206 North
SOMERVILLE
NEW JERSEY 08876 U.S.A.
TEL : (201) 231-36-47

Hoechst

WE STAY IN TOUCH



REACTING,
BLENDING

A Napp specialty.
Quality control and equipment to
meet your schedule competitively.

FDA Registered Plant

Write or Call

Napp Chemicals Inc.

199 MAIN ST. P.O.BOX 900 LODI, NJ 07644

(201) 773-4100 (212) 695-5686

TELEX 134649 FAX (201) 773-2010

THE INDUSTRIAL MARKETING REPORTER • Volume 1 Number 1 • January 1987



Let The Knoll "Caffeine Guarantee" Make You A Winner!

Because we make, stock and ship more caffeine than anyone, we can guarantee quality and on-time delivery of

Caffeine Anhydrous USP

Call Us...

To order, request samples or our free caffeine catalog.
Knoll Fine Chemicals • (212) 752-9520
120 East 56th Street, New York, New York 10022
DMF reference available on request

knoll ...makes it better to run better

DRUGS & FINE CHEMICALS

US Gelatin Hurt by Capsules, But Other Areas Seen Growing

Many gelatin producers agree that the troubles which have befallen the hard capsule industry in 1986 have trickled down to add to the gelatin industry's woes. This is not a unanimous opinion, however.

Because of tampering, many hard capsules have been taken off the shelves. The first and most prominent of these recalls was conducted by Johnson & Johnson, which halted production of "Tylenol." Others followed, including R.P. Scherer, which stopped manufacturing hard capsules in April. One producer says the hard capsule's decline "has had a significant effect" on the gelatin industry. "The gelatin business is in a state of overcapacity due to imports. This has just increased the problem," he says. Others agree.

In the absence of many hard capsule manufacturers, soft capsule usage has increased. These capsules also use gelatin, but gelatin producers explain that there is not as much money to be made in the soft capsule market. One says that the pork-skin derived gelatin that goes into hard capsules is generally of a higher bloom than the beef-hide derived gelatin that is used in soft capsules. He says that, in general, the higher the bloom, the greater the profit margin. Another producer notes that Johnson & Johnson's share was so large, its pullout was going to hurt the gelatin industry regardless of the bloom used.

PROBLEMS OVERCOME?

Some other producers, and believe that the gelatin industry's problems will be overcome. They admit that the short-term effects have been troublesome to a certain extent, but are convinced the long-term effects will not be great. These sources cite increased demand in other areas and the opinion that hard capsules will make a comeback. The latter point is agreed upon by most of the industry, which feels hard capsules are still the preferred dosage form, especially by older Americans.

Something the entire domestic industry agrees on is the effect of imports on the market. Producers see imports as being the main reason for oversupply, and claim that tariff discrepancies make the situation unfair. Colombian and Brazilian imports come to the US duty-free, while producers say there is no market for US product in those countries. Meanwhile, most Western European countries are charged with a tariff between 6 and 7 percent, while gelatin going to Western Europe from the US is slapped with a 12 percent tariff.

Imports to the US are up through June. Nearly 8 million pounds have entered the country, compared to 5.5 million pounds through June 1985. This is despite the lower US dollar.

But, because of the lower US dollar, and despite tariff discrepancies, US producers say the export market is growing. They feel that if the dollar keeps falling, this opportunity will continue to grow, and help alleviate domestic oversupply.

NEW CANDY FAD HELPS

Another thing which most producers are optimistic about is gummibears. This is the much-touted, gelatin-based candy the industry has been hoping will increase demand. All but one surveyed producers agree that is currently happening. The disenter expresses disappointment at gummibear's growth rate. Others, however, think that some people in the industry overestimated the product's potential.

One producer thinks that General Foods' "Jello-Pops" is going to "take off," while another mentions that a minor but growing use for gelatin is in the sports games industry. Has says that one company is manufacturing dye-filled capsules, using gelatin, for simulated war games. So, overall, gelatin sources are convinced that demand will gradually grow, especially if hard capsules do return. However, many doubt the demand

will return to historical levels.

As growth occurs, producers think prices will rise. Prices are said to be firming now, after a lengthy period of softness. This is attributed to the need to restore profit margins, as well as the slightly growing demand, in some areas. Some say the hard capsule situation will probably prevent rapid firming. List prices are called unrealistic, and some producers say material can be purchased between \$1.50 and \$2 per pound, depending on the bloom. One producer, however, says the higher blooms can cost up to \$2.50 per pound.

ANNATTO EXTRACT — Miles Laboratories, Inc.'s bixin products division is increasing its prices for annatto food colors, effective on deliveries made on or after September 29.

The new prices for the company's AFC "water SOIuble 445" (single-strength) will be \$8.30 per gallon in 55-gallon, closed-head,

PRICES TRENDLINES

WEEK ENDING SEPT. 4, 1986

CHANGES/UP

D-cet-pan, \$1 per kilogram

CHANGES/DOWN

None

DRUGS INDEX

The Drugs & Fine Chemicals Index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1986.

Sept. 5, 1986	211.16
Aug. 29, 1986	211.16
Aug. 6, 1986	211.16
Sept. 6, 1985	211.16

Chemical Prices Start on Page 36

non-returnable steel drums; \$8.80 per gallon in 5-gallon white plastic pails; and \$8.75 per gallon in four 1-gallon cartoned plastic bottles. AFC WS 890 (double-strength) prices on the same basis, will be \$14.75, \$14.80 and \$15.20 per gallon, respectively. The increases average 3.5 percent.

According to a Miles spokesman, the increases were necessitated by "inordinately large" increases in bixin seed (the source of the color extract) and in utilities, labor, packaging materials and environmental waste systems. He says that in Kenya, a strike's farmland caused the bixin seed to remain on the vine longer than needed, and therefore it rotted and much of the crop was lost. Kenya and Peru are the main world sources of bixin seed.

DIAGNOSTIC REAGENTS — Ventrex Laboratories, Inc. entered an agreement with Dade/Baxter Travenol on September 1 to provide certain diagnostic reagents and components.

According to a Ventrex spokeswoman, the first order was accepted last week. The product involved in the agreement are expected to complement Dade's immunodiagnostic products. Neither Ventrex nor Dade will specify what products are involved in the agreement, saying that not disclosing these products is part of the deal.

Ventrex's spokeswoman says the agreement should increase the company's sales to hospital clinical laboratories, while still leaving room for direct solicitation of physicians regarding its rapid immunodiagnostic screening tests.

Ventrex, a biotechnology company, recently entered a manufacturing agreement with the Warner-Lambert Company. The spokeswoman says this is part of Ventrex's plan to enter the over-the-counter market.

METHIONINE — Monsanto Agricultural

DRUGS & FINE CHEMICALS

Company's animal sciences division is raising its prices for the methionine hydroxy analogue feed supplement "Alimet" and "MHA" effective October 1.

"Alimet," a liquid methionine source, will cost \$11.5 per pound for bulk tank truckloads. This is an increase of 16¢ per pound. Less than truckload shipments will be \$1.18 per pound. Meanwhile, the price of "MHA," the dry methionine source, is also increasing 16¢ per pound, to \$1.13. Less than truckload shipments will cost \$1.18 per pound.

Monsanto notes that prices for both products will be 3¢-per-pound higher for spot sales, and shipments to Arizona, California, Idaho, Nevada, Oregon, Utah and Washington will be an additional 5¢ per pound.

Customers will be able to order "Alimet" and "MHA" at current price levels until September 30, providing all orders are shipped by October 1.

This price increase will permit recovery from the effects of the strong dollar and inflation of several years ago," says a Monsanto spokesman. Prices were said to be low because of competition levels in 1985.

QUININE/QUINIDINE — Quinine and quinidine prices, which have been rising for all of 1986, continue to rise gradually. However, some speculate that prices have peaked, but add this depends on the US dollar.

The US dollar is considered the main factor in the products' firming. Last September, quinidine sulfate was priced between \$3.00 and \$3.70 an ounce. A year later, estimates range from \$4.25 to \$4.50 per ounce. Early in 1986, the price was between \$4.20 and \$4.25. Quinine hydrochloride is between \$2.50 and \$2.80 an ounce, while quinine sulfate is between \$2.30 and \$2.50 per ounce. These also represent slight increases over early-1986 levels.

In addition to the dollar, the rotting of Africa's cinchona bark is also cited. This has been point of debate within the industry for years. Some sources say this blight has a very real effect on the marketplace, and therefore supplies are tight. Others, though, insist that while the problem is a real one, its extent is exaggerated in order to firm selling prices. Finally, some believe that if driving up selling prices were the sole consideration, they would be even higher than they are now. They say that with the presence of some spot

buyers selling at lower prices, though, they are forced to be competitive.

Ironically, Indonesian product is priced higher than African product. This is ironic because the Indonesians process their own materal, rather than export it for processing. So, their costs are lower. But, an observer says those involved in Indonesia in the US have decided to "be competitive" and charge more, at the risk of losing some business, because they feel the market can support higher pricing. An importer says that with this philosophy, his company has "gotten business and lost business."

United States Department of Agriculture recently compiled 1985 cinchona bark statistics. A USDA official says Zaire (the largest source) produced 3,900 metric tons last year, up from 3,400 metric tons in 1984. This total has crept upward the last few years, but is still considerably lower than the average total of the late 1970's. For example, in 1978, 5,400 metric tons were produced.

Rwanda's total is up considerably, to 1,600 metric tons, up from 1984's 600 metric tons.

RITA Corporation **dl PANTHENOL**

PANTHENOL

THE EFFECTIVE

MOISTURIZER, EMOLlient AND CONDITIONER

RITA Corporation, P.O. Box 556, Crystal Lake, IL 60014

FOR A HEALTHY GLOW TO SKIN AND HAIR CARE FORMULAS

CALL TOLL FREE 1-800-426-7759 / IN ILLINOIS CALL 1-815-455-0530

INTRODUCES A NEW LINE UP OF LIQUID CITRIC ACID...

CITROSOL®

(50% CITRIC ACID SOLUTIONS)

A GRADE FOR EVERY NEED

CITROSOL-501 • CITROSOL-502 • CITROSOL-503 • CITROSOL-504

For Data Sheet #678 or other information,
please talk with your sales representative or write or
call your closest regional sales office.

230 Brighton Road, Clifton, NJ 07012	(201) 470-7712
2400 West Central Road, Hoffman Estates, IL 60196	(312) 381-9500
4360 N.E. Expressway, Doraville, GA 30340	(404) 448-8666
P.O. Box 222249, Dallas, TX 75222	(214) 647-0222
16700 Red Hill Avenue, Irvine, CA 92714	(714) 540-9180

Pfizer

CHEMICAL DIVISION

HACH synthesis, inc.

Organometallics
and Organosilanes

Specializing in:

d₁, tr₁, tetra-, hexa-alkyl
and -aryl germanium
compounds.

A wide variety of silanes,
metal alkoxides, coordinate
compounds and other
organometallics also are
available.

Custom Inquiries
Welcome
307-237-0037

Call for a Quotation
Today

Free Catalog Available

HACH synthesis, inc.

2393 North Salt Creek Highway,
PO Box 3723
Casper, Wyoming 82602



Industria Chimica e Farmaceutica, S.p.A.,
Milan, Italy

Bromodiphenhydramine
Dimenhydrinate
D(-)-P-Hydroxyphenylglycine
Diphenhydramine HCl
Dipyridamol

Bromodiphenhydramine

Disopyramide Phosphate
Dopamine HCl
Homoveratrylamine
Papaverine HCl
Phentyloins

Please contact:



S.S.T. CORPORATION
Pharmaceuticals - Intermediates - Vitamins - Fine Chemicals
635 Brighton Road, Clifton, NJ 07012 (201) 473-4300
Toll Free (800) 222-0021
Cable: SST CORP CLIF
Telex: WU 133342
Telex: RCA 219149

BENZOCAINE USP
PROCAINAMIDE HCl USP
LIDOCAINE USP
LIDOCAINE HCl USP
PARA AMINO BENZOIC ACID USP

SALSALATE

SALES AGENTS FOR WYCKOFF CHEMICALS CO., INC.

R.W. Green & CO., Inc.

Serving the
Chemical Industry
since 1880
1445 East Putney Avenue
Old Greenwich, Conn. 06870
203/637-4371
64 Orland Square Drive, Suite 110
Orland Park, IL 60462
312/460-0772
601 Dove St., Suite 228
Newport Beach, CA 92660
714/476-0810
N.Y. Telline: 212/246-9680

CHEMICAL PROFILE

Continued from Page 54

PRICE

Historical (1970-1985): High, \$3.20 per unit-ton, agricultural grade, 52.54 percent, tanks, works; low, \$1 per unit-ton, same basis. Current: \$2.40 to \$2.50 per unit-ton, same basis.

USES

Diammonium phosphate, 20 percent; merchant shipments (for feed, industrial and blending applications), 10 percent; superphosphoric acid, 7 percent; monoammonium phosphate, 5.5 percent; triple-superphosphate, 4 percent; dry fertilizer exports, 41 percent (including 75 percent DAP, 20 percent TSP, 5 percent MAP); SPA exports, 7.5 percent; phosphoric acid exports, 4 percent; miscellaneous, 1 percent.

STRENGTH

Fall export shipments of phosphoric acid and ammonium phosphates should pick up since China and India are expected to re-enter the market after a year-long hiatus.

WEAKNESS

Producer operating rates were below 60 percent this Summer. Prices are long-time low. Forecasters predict more farm acreage reductions for 1987. New production in North Africa and the Mideast will decrease the US share of the world market an estimated 10 percent by the end of the decade.

OUTLOOK

Despite shrinking share of the world market, US exports should grow, due to increased population and grain demand. No new plant construction is expected through 1990. World demand growth will improve operating rates.

CHEMICAL MARKETING REPORTER

Quickest Way
to Keep Current
on Chemical Costs

USP Calcium Lactate Derived from Milk

5 types

Sheffield Products
©Kraft, Inc.
P.O. Box 630, Norwich, New York 13815
607-334-9951, Telex 646056

Chemicals May Detect Arson

Continued from Page 9

as wood, synthetic fibers (rugs), and plastics under controlled laboratory conditions.

Upon analysis of the soot from these fires, Mr. Chesler and his colleagues noticed that PAHs were showing up in easily detectable quantities. When the same household materials were burned without using accelerants, only minimal amounts of PAHs were present — "not enough to interfere with the test," Mr. Chesler says.

The technique appeared to be working in the lab, but the question remained: How well would it perform in an actual fire? To find out, Mr. Chesler enlisted help in gathering on-location soot samples.

He asked forensic chemists at the Treasury Department's Bureau of Alcohol, Tobacco and Firearms (BATF) to collect sooty residues from the fires that agency periodically starts for training purposes in abandoned residential buildings. Only a portion of the fires were initiated with accelerants, and NBS' job was to determine which ones.

Later, from resulting analyses of the soot samples, NBS researchers succeeded in identifying all the accelerant-started fires.

Despite its apparent promise as an arson detection tool, Mr. Chesler says the test method needs "considerable work" before it could be used as court evidence and that care must be taken when interpreting results. For example, the technique could not be applied in some situations such as a building that housed hydrocarbon-based liquids before the fire.

Mary Lou Fultz, a BATF chemist who has collected soot samples for the NBS research, says the technique could have value as a supplement to existing arson detection techniques. "I can see it adding credence to current methods," she says. (Arson is typically implicated when small traces of unburned accelerant are detected after the fire is extinguished.)

Erythromycin USP Erythromycin Ethylsuccinate USP Erythromycin Stearate USP

Highest Quality For Your Most Demanding Formulation From

Upjohn

The Upjohn Company Fine Chemical Marketing
Kalamazoo, Michigan 49001 616-323-5844

ROCHE VITAMIN C. ITS VERSATILITY GOES BEYOND CONFIGURATION.

You can shape Roche C-90® compressible vitamin C into any configuration, from conventional white tablets to cartoon-character chewables, coated or uncoated, small tablets and large wafers. Its versatility goes further: C-90 will fit any formula or technology, including time-release.

Its carrying capacity easily accepts the most potent multi-vitamin or multi-mineral combination. C-90 gives you stability that stretches shelf-life. More than 125 billion tablets have made Roche C-90 the standard of the industry.

For vitamin products in special markets, we offer Roche C-95™, a vitamin C granulation made without using sugar, starch or preservatives. Every lot of C-90 and C-95 is performance-tested before it leaves our plant.

Smaller, high-potency multivitamin tablets with vitamin C can be produced with Roche niacinamide ascorbate, an excipient-free, directly compressible complex of ascorbic acid and niacinamide.

They're all yours from Roche. Three directly compressible vitamin C products with the quality you need and the versatility you'll love. For more information, call (201) 235-8119, or write Chemdex Information Services, Roche Fine Chemicals, Hoffmann-La Roche, Inc., Nutley, NJ 07110.

ROCHE

WHEN IT COMES TO VITAMINS,
THE EXTRAS COME FROM ROCHE.

RECOVERING YOUR SOLVENTS SAVES YOU MONEY!

Let Solvents Recovery Service of New Jersey show you how we've done it for others, and how we'll do it for you.

We've been recovering industrial solvents of many types since 1937, and our New Jersey facility is fully permitted by federal and state regulatory agencies.

We can provide custom-basis recovery, returning clean material to you for profitable reuse or economical reuse. We also provide full disposal services for any hazardous wastes involved, in complete compliance with all required regulations.

FOR MORE INFORMATION, WRITE OR CALL US TODAY.

SOLVENTS RECOVERY SERVICE OF N.J., INC.
1200 Sylvan Street, Linden, NJ 07036 • 201-862-2000

CHI₃
iodoform

Iodine
Chemistry
Exclusively

D
DEEPWATER INC.
P.O. Box 17599
Irvine, CA 92713
714/751-3522
800/854-4064

RCO 4829

FOOD ADDITIVES

CITRIC ACID
FRUCTOSE USP FCC
LACTOSE HYDROUS USP
MANNITOL USP
MONOSODIUM GLUTAMATE
SODIUM CITRATE USP
SODIUM SACCHARIN
SORBITOL

SERVING THE PHARMACEUTICAL, FEED AND FOOD INDUSTRY. PLEASE CALL FOR OUR COMPLETE DELIVERY PROGRAM.

HELM NEW YORK CHEMICAL CORPORATION
1110 CENTENNIAL AVENUE,
PISCATAWAY, NEW JERSEY 08854
201-981-1180/TELEX: WU 642303
TOLL FREE: 1-800-526-3568

CHEMICAL PROFILES

Tell you about chemical process materials. Contact Services Department, Schnell Publishing Co., 100 Church St. New York, N.Y. 10007.

Akzo Chemie THE RELIABLE, EXPERIENCED SOURCE

GLUCONAL GLUCONATES

CALCIUM GLUCONATE
COBALT GLUCONATE
COPPER GLUCONATE
FERROUS GLUCONATE
MAGNESIUM GLUCONATE
MANGANESE GLUCONATE
POTASSIUM GLUCONATE
SODIUM GLUCONATE (Food Grade)
ZINC GLUCONATE
CALCIUM D'SACCHARATE



DALE A. SCHLESINGER TECHNICAL INC.

CHEMICAL MARKETING REPORTER

Du Pont Test Help for AIDS

Du Pont's Biotechnology Systems Division has added to its growing line of AIDS research products by introducing a nick translated DNA probe for HTLV-III research.

The HTLV-III "Nick Translation Long Probe System" is designed to analyze samples for the presence of HTLV-III by detecting sequences that are complementary to the radiolabeled probe provided in the kit.

The DNA probe can be used by researchers to confirm results from the Du Pont p24 RIA antigen kit that was introduced earlier this year.

Both tests are equally sensitive to p24 and are more quantitative than a reverse transcriptase assay. The high degree of sensitivity provides researchers with ability to study the action of drugs being tested against the HTLV-III virus.

The reverse transcriptase method of quantitating p24 is 200 times less sensitive than both the RIA and DNA probe systems.

Moreover, a reverse transcriptase assay is far more labor intensive and can take up to two days to complete.

The p24 RIA kit can provide a result in several hours, and the DNA probe system can detect 104-105 copies of HTLV-III DNA or RNA in an overnight exposure.

Studies with clinically relevant viral, bacterial and human DNA show no cross-reactivity.

The HTLV-III Nick Translation Long Probe System comes with purified DNA fragment, standard curve positive control DNA, "NENSORB-20" cartridge, alpha 32p dCTP, DNase 1, DNA polymerase I, control plasmid

DNA and deoxyribonucleotide triphosphate mixture.

A detailed manual, quality controlled protocols, and a troubleshooting guide are provided to assist researchers less familiar with molecular biology procedures. Test and translation assays can be done with this system and 120 to 450 samples can be screened.

Patent Pact Set By the US, Korea

The Reagan Administration has negotiated an agreement with the government of South Korea that will halt Korean pirating of American patents and other intellectual property, including pharmaceuticals and chemicals.

According to the White House, South Korea agreed to amend its patent laws to exclude chemicals, pharmaceuticals and microorganisms, remove restrictions on royalty terms in trademark licenses, and observe international agreements on copyright.

Current Korean law denies patent protection for pharmaceuticals and agricultural chemicals.

"This agreement represents a major achievement in our efforts to obtain effective intellectual property protection for American industries," said President Reagan. "Thus, this agreement will encourage free trade with the Republic of Korea and remove trade distortions."

Agreement by the Seoul government came almost a year after President Reagan ordered a formal investigation by US trade representative Clayton Yeutter into unfair trade practices that could have led to US economic retaliation.

The HTLV-III Nick Translation Long Probe System comes with purified DNA fragment, standard curve positive control DNA, "NENSORB-20" cartridge, alpha 32p dCTP, DNase 1, DNA polymerase I, control plasmid

CUSTOM SYNTHESIS

FINE CHEMICALS
SPECIALTY POLYMERS • PHARMACEUTICAL INTERMEDIATES



RAYLO CHEMICALS

Division of Terochem Laboratories Ltd.
8045 Argyll Road, Edmonton, Alberta, Canada T6C 4A9
Telephone (403) 468-6060 Telex 037-4326

Radioactive Chemicals

(Continued from Page 7)

ter systems. All of the radionuclides appear in greater frequency and at higher levels in private wells and the smaller (those serving less than 1,000 people) public water systems.

Relatively high levels of the naturally-occurring radionuclides are found in specific areas of the country. The two isotopes of radium are most prevalent in the North-Central states and the Appalachian region. Initial monitoring data and surveys lead EPA to estimate that as many as 500 public water systems may exceed the interim standard for radium.

Almost all of these are expected to be from groundwater, not surface water supplies. About two-thirds of those exceeding the interim standard of five picocuries per liter of water (a picocurie is one trillionth of a curie, a common measure of radiation) are in the range of five to 10 pCi/l.

The agency estimates the population risk of bone cancer from elevated levels of radium in water supplies is in a range between three and 60 deaths per year for each of the two radium isotopes. Outside the North-Central and Appalachian areas, radium has widespread occurrence throughout the United States but at levels which carry a very small health risk.

High levels of uranium in water are most prevalent in the Colorado plateau and the Rocky Mountain region. The population-weighted average uranium concentration in the United States is estimated to be 0.8 pCi/l.

Because of a large uranium deposit in South Dakota, that state has been found to have the highest average uranium concentration at 6.7 pCi/l. Most of the Western states have average concentrations above two pCi/l.

Projections from available data lead to estimate that a few hundred public water supplies may exceed 40 pCi/l, a risk level comparable to the interim radium standard.

The agency's future proposal to regulate radionuclides in public water supplies would include both Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs).

MCLGs are non-enforceable health goals set at levels that will result in no known or anticipated adverse health effects, with an adequate margin of safety.

MCLs for all the radionuclides mentioned are expected to be set at zero since they are carcinogenic and thus a margin of

safety cannot be established. EPA will also propose MCLs and monitoring requirements. MCLs are enforceable standards and are set as close to the goals as feasible, taking into account cost, availability of treatment technologies and other practical considerations.

The original Safe Drinking Water Act of 1974 required EPA to establish interim regulations for a limited group of contaminants and at a later date revised regulations for these and other contaminants. However, the 1986 amendments to the Act require EPA to develop MCLGs and MCLs simultaneously and to eliminate the distinction between interim and revised regulations.

Cyanamid

(Continued from Page 3)

which the glass pane is encapsulated into RIM frames away from the assembly line. The RIM can be impregnated with aliphatic isocyanates to add light stability to the frame, enabling it to retain its original color without repainting. To date though, the Mobay official points out that very little aliphatic isocyanates have been employed in RIM applications.

The Cyanamid announcement marks the second major aliphatic isocyanate capacity increase started in six weeks. At the end of July Mobay said it was implementing a 25-percent expansion of its HDI polyisocyanate capacity at Baytown in order to "keep pace with the growing demand from the paint industry." The expansion is due on line in mid-1987. At the time Mobay said supplies of HDI-based polyisocyanates had grown tight, mainly because of increasing demand for high performance polyurethane coatings.

The market is expected to further grow, Mobay says, because of active development projects in markets such as new auto topcoats, maintenance coatings, wood, coil, pipe and roof coatings and heavy industrial coatings.

Cyanamid says production facilities for the meta-TMXDI and meta-TMI will be completed in 1987. Later on, the company says it will begin producing para versions of the two compounds. The production route marks the first commercial attempt to produce isocyanates without phosgene since Arco abandoned an effort to make MDI without phosgene several years ago.

Zambon Chimica S.p.A.
Bresso-Milano, Italy



"For investigational use only":

HYDROXYUREA
LACTULOSE CRYSTALS 98%
NAPROXEN
SULINDAC

Also available:
4-HYDROXYISOPHTHALIC ACID
PARAMETHYLERCAPTO BENZALDEHYDE
PARAMETHYLERCAPTO BENZOIC ACID
... AND OTHER MERCAPTAN DERIVATIVES.



Please contact
S.S.T. CORPORATION
Pharmaceuticals - Intermediates - Vitamins - Fine Chemicals
835 Brighton Road, Clifton, NJ 07012 | (201) 473-4300
Toll Free: (800) 222-0921
Cable: SST CORP CLIF
Telex: WU 153242
Telex: RCA 219149

Check Our Prices And Our Quality

- Barium Chemicals
- Carboxymethylcellulose (CMC)
- Donatonium Benzoate
- N,N-Dimethylglycine
- Diphenone
- Phenyl Phenoxy Dichloride
- Tantalum & Niobium
- Tellurium
- 2,4,5-Trihydroxy Benzophenone
- Warfarin
- Zincium Oxychloride

ATOMERIC CHEMTEALS CORP.
81 Carolyn Blvd., Farmingdale, NY 11735
Telephone: 516-984-9000 Telex: 686228

prases PRODUCTS, INC.

A Subsidiary of prases, Istanbul, Turkey

Acetaminophen
Aspirin
Dihydroxyaluminum Sodium Carbonate
Aluminoglycolate
Mefenamic Acid
Sulfamethoxazole
Trimethoprim

Immediate Delivery
from N.J.
Warehouse

186 West End Ave., Somerville, N.J. 08876 • (201) 725-7373 • Telex: 247576 pras

Sodium Bicarbonate U.S.P.



Now available in mixed shipment with
Ammonium Bicarbonate, Sodium
Carbonate Monohydrate, and
Con Sal (Sodium Carbonate Hydrated).

Granulation and purity to satisfy every food, pharmaceutical, reagent and industrial need.

Available in easy-to-handle 50 lb. or 100 lb. bags.

By far, the most comprehensive technical support program in the industry.

Tap into the commitment to excellence that's as strong today as it was 140 years ago. Contact...

Church & Dwight Company, Inc.
Marketing Department
Chemical Division
P.O. Box CN297
Union, NJ 07084
(201) 628-3168
In N.J.: (201) 683-5900

THE POWER OF COMMITMENT AT WORK



The World  is our Source

MALIC ACID

FCC FINE, GRANULAR

CITRIC ACID

USP ANHYDROUS

LACTIC ACID

FCC 50%, 80%, 88%

FUMARIC ACID

FCC FOOD GRADE, CWS

TARTARIC ACID

NF FINE, GRANULAR

Your Complete Source for Food Acids

Food Ingredients Division

Fallek Chemical

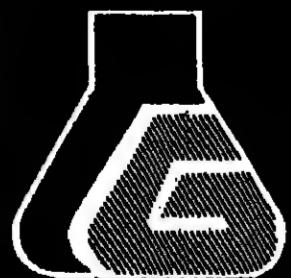
2125 Center Avenue, Fort Lee, New Jersey 07024

Telephone: (201) 592-8100

NEW JERSEY • CHICAGO • ST. LOUIS • LITTLE ROCK • LOS ANGELES

PSEUDOEPHEDRINE HCl PHENYLEPHRINE HCl

From the Prime Source



Ganes Chemicals, Inc.

Manufacturers of Medicament Ingredients
Serving the Pharmaceutical Industry
for Over 50 Years

1114 Avenue of the Americas
New York, N.Y. 10036
(212) 391-2580

Information and Samples available on request

Chemical Finance

BP's Profits Hold Despite Oil Price Decline

British Petroleum Company's historical cost profits before extraordinary items in the second quarter declined to \$41.7 million from \$44.5 million a year ago. On a replacement basis, profits rose to \$73.2 million from \$57.2 million a year ago. Inventory losses totalled \$41.5 million because of the oil price decline.

Chemical, Coatings Merger Trend Steady

There were 40 mergers in the chemicals, paints and coatings field in the first half of this year, versus 45 a year earlier, but the dollar value was nearly the same (\$2.9 billion versus \$2.916 billion a year ago), according to W.T. Grimm & Co., Chicago. For all US industry, the value of first-half mergers declined to \$77 billion from \$100 billion last year.

Exxon's Shares to Be Listed in Tokyo

Exxon Corporation has applied for the listing of its shares on the Tokyo Stock Exchange. The listing, the first for any foreign oil company on that exchange, is expected to take place in the fourth quarter.

Gas Conversion Increases 9 Percent in 1985

Conversions of existing homes to natural gas from alternative fuels increased 9 percent in 1985 over 1984, according to the American Gas Association. Of total conversions to gas, some 78 percent, or 113,475 units, were from fuel oil. Conversions to electricity amounted to 20,808.

Loctite to Buy Remaining Luminescent Shares

Loctite Corporation, Newington, Conn., has agreed in principle to acquire all the remaining shares in Luminescent Systems, Inc., of Lebanon, N.H., in which it has held a 15 percent interest for the past two years.

Sohio to Issue Notes Indexed to Oil Price

Standard Oil Company, Cleveland, Ohio, will issue \$100 million of notes indexed to the price of oil and due September 1, 1989. Unlike the oil-indexed notes which the company issued in July, these notes will not carry fixed coupon debentures.

Staley Filing for Global Stock Offering

Staley Continental, Inc., Rolling Meadows, Ill., has filed an SEC registration statement for a proposed global offering of 4 million shares of common stock, 3 million for the US and 1 million for markets abroad.

3M Gives Analysts Optimistic Forecast

3M Company expects higher sales and earnings for the third quarter and for the full year, company executives told analysts in St. Paul, Minn. 3M's business is benefiting from a strong flow of new products and from programs to improve productivity and control costs, executives stated.

Vencap Invests \$3 Million in BioTechnica

Vencap Equities Alberta, Ltd., has invested an additional \$3 million (Canadian) in BioTechnica International of Canada, Inc., raising its total investment to \$7 million. The companies have agreed to an additional \$5 million investment over the next two years subject to certain conditions.

Wertheim Recommends Nova and Imre Corp.

Wertheim & Co. has reaffirmed its recommendation on the shares of Nova Pharmaceuticals Corporation and is advising clients interested in speculative, high growth small companies to purchase Imre Corporation's shares. Takeda Chemicals, of Japan, has taken an equity position in Imre and will seek rights to develop the company's "Prostolin" filler for the Japanese market. Nova has exclusive worldwide rights to use Pharmatec Corporation's carrier technology for treating brain tumors and inflammations.

Canonic Making First Public Offering

Kidder Peabody & Co., as manager of the underwriting group, announced the first public offering of 1,750,000 common shares of Canonic Environmental Services Corporation at a price of \$18 per share.

DSM's Net Up Despite Lower Sales

Dutch State Mines, the inorganics producer headquartered in the Netherlands, raised its net income in the first half to the equivalent of \$84 million from \$81 million a year ago. Sales declined to \$485 million from \$800 million and operating profit eased to \$11 million from \$218 million, but lower taxes and smaller non-operating charges produced a positive trend.

Engelhard Boosts Cash Dividend

Directors of Engelhard Corporation, Edison, N.J., have approved a 8 percent increase in the cash dividend on the common stock to 19 cents per share from 18 cents, payable September 30, to holders of record on September 17.

Greenwell Montague Reaffirms Bayer Rating

Greenwell Montague Research has reaffirmed its "buy" rating on the shares of Bayer AG, noting that it views the long-term prospects of Bayer as a little stronger than those of its two largest German rivals — Hoechst AG and BASF AG.

Damon Withdraws Subordinated Debenture Offering

Damon Corporation has withdrawn its proposed public offering of convertible subordinated debentures. Damon had no specific use for the funds, and the present market is no longer favorable.

Standard Gypsum Completes Stock Sale

Standard Gypsum Corporation, Houston, Tex., has completed the sale of 1.1 million shares of its common stock to General Minerals Corporation, of Canada, and 1.1 million shares to Leeb Investors Company. The company also has agreed to purchase from General Minerals 13,121 acres of land in Culberson County, Tex., believed to contain up to 200 million pounds of gypsum reserves.

National Gypsum Sells Glass Assets

National Gypsum Company has signed a letter of intent to sell most of the assets of its Binswanger Glass subsidiary to ACI International Ltd., an Australian manufacturer of glass and plastic containers and building products. The purchase price was not disclosed.

Binswanger is headquartered in Memphis, Tenn., and distributes glass throughout the South and fabricates mirrors and thick glass for furniture applications.

National Gypsum says the sole is part of its strategy to divest itself of non-core business units. The company says it is refocusing its operations on building products and services.

ACI currently distributes and fabricates glass and mirror products on the West Coast and is the leading marketer of glass products in Australia.

Dow Sells Stake In the Rorer Group

Dow Chemical Company has sold its stake in Rorer Group in a private transaction for approximately \$80 million, or \$39.50 per share. Dow held just over 2 million shares, or about 15 percent of Rorer's total shares outstanding.

Dow accumulated the shares for investment purposes over a short period, running from mid-1983 to early 1984.

Dow says the sale of the shares is part of the normal management of the company's

funds and investments.

According to Dow, proceeds from the sale will be used to retire a portion of the company's debt.

As a condition of the sale, the purchaser of the stock has agreed to pay Dow an additional amount should Rorer merge with or be acquired by another company within the next 12 months under terms in which the value of Rorer shares exceeds \$43 per share.

Last summer, Dow unsuccessfully fought adoption by Rorer directors of a "poison pill" provision designed to discourage a takeover.

Pfizer to Acquire A Pump Producer

Pfizer, Inc. has signed an agreement to acquire Infusaid Inc., a producer of implantable and external infusion pumps, from Intermedics Inc. Terms of the deal were not disclosed.

Infusaid, based in Norwood, Mass., will join the Shiley division of Pfizer's Hospital Products Group.

The purchased company sells pumps that are used to regulate the flow of medicine into hospital patients, and had sales of \$13.5 million last year.

Pfizer's Hospital Products Group was formed in 1972, and is a worldwide manufacturer and marketer of a variety of products including artificial hips and knee joints and respiratory equipment.

The Division had worldwide sales of \$555 million last year. Intermedics, headquartered in Angleton, Tex., produces medical equipment, including pacemakers.

There are more than 150 Miles Distributors to count on as your source for LTL quantities of these Miles products:

- Citric Acid
- Sodium Citrate
- Potassium Citrate
- Sodium Benzoate
- Potassium Benzoate
- Potassium Sorbate
- Ascorbic Acid

Call 1-800-348-7414 for the name and address of your nearest Miles distributor.

Biotech Products Division



ROQUETTE
The World's Largest Producer of
SORBITOL
1-800-223-5305
ROQUETTE
CORPORATION

Executive Office/
Manufacturing Complex
1550 Northwestern Avenue
Gurnee, IL 60031
1-800-426-8668
In New Jersey call (201) 343-4560
Telex: (WU) 661463 ROQ NYK

Eastern Regional Office
Continental Plaza
433 Hackensack Avenue
Hackensack, NJ 07601
1-800-426-8668
In New Jersey call (201) 343-4560
Telex: (WU) 661463 ROQ NYK

Liquid Sorbitol • Crystalline Sorbitol • Mannitol • Crystalline Fructose • Lyosorb® • Corn-Starch
Liquor Solids • Glucoside Acid • Modified Food and Industrial Starches • Potato Protein • Dextrose •
Dextrin • Maltodextrin • Polyols • Glucosid-Dextro-Lactose • Sodium and Potassium Gluconates
CHEMICAL MARKETING REPORTER Quickest Way To Keep Current
on Chemicals Costs

Now available in mixed shipment
with Sodium Bicarbonate, Sodium
Carbonate Monohydrate, and Con Sal®
(Sodium Carbonate Hydrated).

Choose from:

■ Treated (flow agent) and untreated grades, both meeting Food Chemicals Codex.

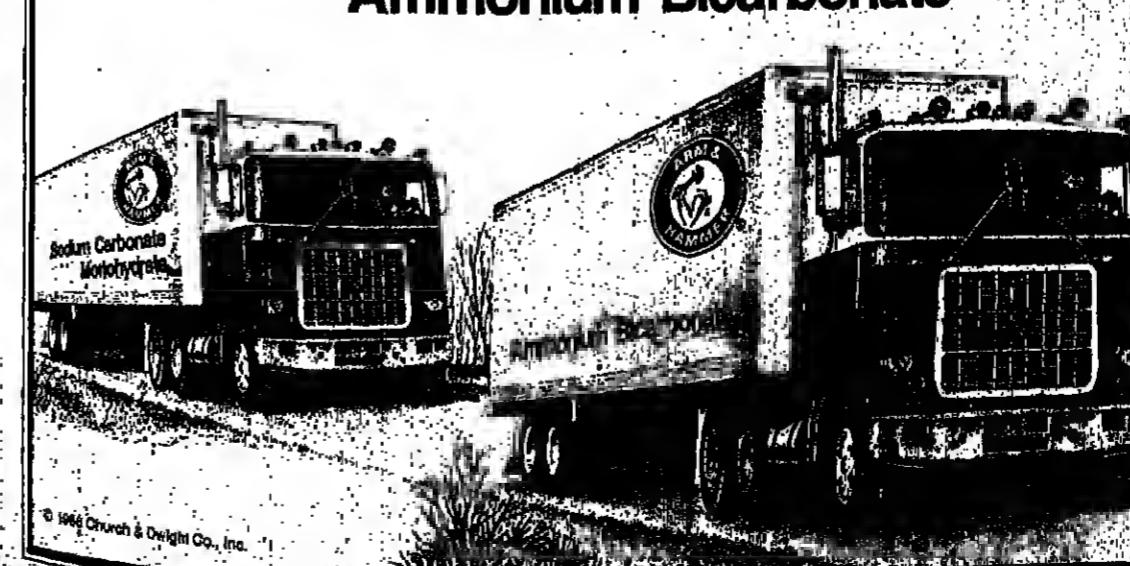
■ Available in 50 lb. bags or 300 lb. drums.

The only producer in the U.S., we back our Ammonium Bicarbonate by the experience and knowledge gained over a century of bicarbonate specialization. Why compromise? Contact...

Church & Dwight Company, Inc.
Marketing Department
Chemicals Division
PO. Box CN 6297
Princeton, NJ 08540
(609) 426-3385
In NJ—(201) 683-5800 THE POWER OF COMMITMENT AT WORK



Ammonium Bicarbonate



PERFUMES & FLAVORS

an importer, "but the price is prohibitive." Chinese and Javan vetiver oil are priced at less than two-thirds of the Haitian level, at \$17 to \$17.25 per pound.

CASSIA — The cassia market continues to firm with spot prices up 12 to 16c. per pound. Points of origin in Indonesia are offering only small amounts to shippers. "It appears that a cartel is forming and an effort to coordinate a price hike is succeeding," says a broker. Another industry analyst says these claims are unlikely to be realized. "It's always in vague terms that we hear about this." He notes that the market is resistant. "Demand rarely varies; when they raise or lower prices consumption stays the same. The market is inelastic," he says.

OREGANO — Greek and Turkish oregano are up still further to \$2.25 per pound from \$1.15 three weeks ago. The 1985 crop is gen-

erally considered to be exhausted, with no new information on the 1986 crop available. "We're just waiting," says a broker. "The only change is the escalating price of last year's oregano."

Pfizer Breaks Ground For Cogeneration Unit

Ground has been broken in Southport, N.C., for 110-megawatt cogeneration plant that will supply steam to Pfizer's nearby citric acid plant while generating electricity for the Carolinas Power & Light Co. at Brunswick.

Located on a 30-acre CP & L site due West of Pfizer, the cogeneration facility will be built by Cogenix Inc. of Charlotte at an estimated cost of \$80 million.

Pfizer says project will serve as a satellite energy plant for the company, a heavy consumer of steam in Southport. Steam ex-

hausted from the Cogenix turbines and piped to the Pfizer plant will improve the company's position as a manufacturer of citric acid, Mr. Adams said.

According to Larry Frost, Cogenix vice president, the Brunswick County installation is a sister to a similar power plant designed to serve the textile industry at Roxboro, N.C. Both will conform to state and Federal environmental standards in accordance with the Public Utility Regulatory Policies Act of 1978 which was enacted to stimulate cogeneration in a broad array of industrial and commercial applications.

Landscaping is an intrinsic part of the plant design which reflects advanced technological and pollution control concepts, Mr. Frost added.

Also participating in the groundbreaking ceremony with Cogenix executives were U.S. Congressman Charles Rose representing North Carolina's Seventh District; Secretary of Transportation James E. Harrington, who attended for Governor James Martin;

Donald E. Kolowksy, executive vice president — Pfizer Chemical Division; Donald T. Farley, senior vice president — Pfizer Chemical Division, and Michael E. de Shere, director of the Resources Development Corporation for Brunswick County.

Pfizer's citric acid facility at Southport recently observed its tenth year of operations. The plant is designed for easy expansion to provide capacity for growth in citrus demand, particularly in emerging Industrial and detergent applications, Mr. Adams said.

Citric functions as an acidulant, flavoring and preservative in a variety of foods and beverages and in pharmaceutical and cosmetic applications.

Pfizer Inc. is a worldwide research-based company with businesses in health care, agriculture, specialty chemicals, materials science and consumer products. The company reported sales of more than \$4 billion in 1985.



We're growing bigger without losing our personal touch.

FLORASYNTH

Flavors and Fragrances

Executive Offices: 410 E. 62nd Street
New York, New York 10021

Worldwide Creative Centers,
Manufacturing Facilities and Sales Offices

HEAVY & AG CHEMICALS

Phosphate to Recover

Continued from Pg 7

quoted between \$130 and \$132 per ton, f.o.b. US Gulf. These are called below cash cost by many. Business, as expected, is fairly quiet at present.

Farmland Industries says it will restart recently observed its tenth year of operations. The plant is designed for easy expansion to provide capacity for growth in citrus demand, particularly in emerging Industrial and detergent applications, Mr. Adams said.

For instance, the trend in the US towards increased poultry consumption tends to decrease grain demand, as poultry are a much more efficient grain converter than are beef.

Likewise, he points out that phosphate production by countries such as Tunisia, Morocco and Jordan is generally state-controlled. These countries are not producing and selling on a profit-motivated basis, and are interested mainly in generating foreign currency. Mr. Baumer does not see these producers as an insurmountable threat, but does regard them as a considerable question mark.

For the present, though, observers point mainly to two bright spots: low inventories and signs that the export market is picking up.

Mr. Nyki of Texsgulf says that while 1985 phosphate shipments are expected to hit 9.4 million tons, production is going to be closer to 8.7 million tons, with the difference being made up by inventory reductions.

Many producers agree with this idea, saying that most of them are sold out pretty much through October. Helping to deplete inventories was a mid-August tender by Pak-

Iao of about 250,000 metric tons.

A.I.D. SPONSORED TENDER

Phoschem, the export cartel representing some of the industry, was unable to participate, as the tender was sponsored by the Agency for International Development, and was technically a domestic sale. Sources report that IMC and Texsgulf got the bulk of the order, with Gardiner taking the balance.

The negative side of the tender was the price between \$135 and \$137 per metric ton, bagged and f.o.b. vessel, according to one source. Another source comments that he couldn't have bought the raw materials at that price. Export prices are now sold in the range of \$138-to-\$140-per-metric-ton range.

Phoschem reports that other countries such as Iran, India and Japan have been active buyers. If not in such large quantities, Libya is reported to have purchased about 100,000 metric tons from Turkey and Korea. This should help US business, at least indirectly.

Another tender from Pakistan, as high as 350,000 metric tons, has been rumored. China is said to still be shipping from its last-year orders, but is expected to be back in the market soon.

Fred Bless, president of Phoschem, says that after the Summer break-up of the group, it now includes Freeport, W.R. Grace, IMC, Occidental and Texasgulf. These producers comprise about 50 percent of industry capacity that is now running, and are, Mr. Bless feels, the ones who will survive the present crisis.

On the domestic side of the business, producers are waiting to see what Fall fertilizer demand will bring. At present, prices are

FERTILIZER CHEMICAL OUTPUT: JUNE

CENSUS BUREAU NUMBERS IN SHORT TONS ON KEY FERTILIZERS.

	JUNE	MAY	JUNE '85
Ammonia, syn., anhyd.	1,009,515	1,255,069	1,407,113
Ammonium nitrate	447,790	494,797	607,085
Ammonium nitrate/urea solutions	151,233	185,179	199,635
Ammonium phosphate	70,539	74,991	72,042
Ammonium phosphates	45,510	52,499	47,003
Diammonium phosphate	191,097	191,882	159,394
Nitric acid	845,845	891,885	944,593
Phosphoric acid	530,851	524,921	592,226
Sulfuric acid	731,285	715,215	822,730
Superphosphate, concentrated	2,910,571	3,108,215	222,773
Superphosphate, normal & enriched	145,714	122,569	30,023
Vinegar	1,513	15,207	—
	921,198	1,031,144	1,316,536
	406,599	505,324	997,342

THE CLEAR CHOICE IS KAISER CHEMICALS

Continued production, continued supply.

While other companies are experiencing reduced product availability, we at Kaiser Chemicals have increased product availability and doubled our commitment to serving the market. We are manufacturing SSF, we are shipping it, and with the world's largest production facility, we are equipped to continue production.

Kaiser is the only domestic producer of SSF that kept production rolling during the recent raw materials shortage.

And we'll continue to be your steady, reliable source. Our SSF has uniform quality and consistency with excellent flowability.

Kaiser Chemicals has sales offices in Atlanta, GA; Baton Rouge, LA; Dallas, TX; Dolton, IL; Houston, TX; Orange, CA; Springfield, NJ, and Tulsa, OK. Or call (713) 872-5550 to discuss your requirements.

Kaiser Chemicals, 30100 Chagrin Boulevard, Cleveland, Ohio 44124.

Giulini Corporation

1250 Broadway New York, NY 10001

For over 150 years Giulini Chemie has produced high quality chemicals for many diverse industries. We are highly integrated from basic raw materials to customer service laboratories aimed at solving your problems. So here is a chemical product line you can literally sink your teeth into.

1. Fine Chemicals-Analcids—Aluminum end magnesium wet gels, dried gels and liquid gels for pharmaceuticals.

2. Synthetic Gypsums—For dental laboratories, jewelry casting and the hobby industry.

3. Aluminum Sulfate and Phosphates—Aluminum sulfate; ammonium end potassium alum—technical FCC and USP grades. Tech grade phosphates—granular and powder.

4. Sodium Aluminate Powder—Set accelerator in concrete.

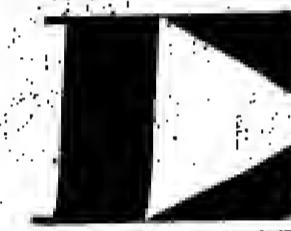
5. Siliphos™ System—For prevention of scale and corrosion in small cooling systems, process water and potable water for homes, hotels, etc.

Call 212-563-4615.
Telex: RCA 220 531.





YOUR HEAVY CHEMICAL REQUIREMENTS WITH TOTAL CONFIDENCE IN SPECIFICATION AND DELIVERY...



ESSEX INDUSTRIAL CHEMICALS INC.

A Wholly Owned Subsidiary of
ESSEX CHEMICAL CORPORATION

1401 BROAD STREET, CLIFTON, NEW JERSEY 07015 TELEPHONE: (201) 773-6300

Cesium Chemicals
Now available from a
new domestic producer
known for quality
and service for over
70 years.

FOR MORE INFORMATION CONTACT:
SPECIAL PRODUCTS DIVISION

carus
CHEMICAL COMPANY

(In Illinois, 800-435-6856)
(From Canada, 815-223-1500)

800-435-6856

HEAVY CHEMICALS

\$220 per ton; Baltimore, Md., \$240; St. Louis, Mo., \$225 per ton; Bayonne, N.J., \$240 per ton; Cincinnati, Ohio, \$220 per ton; Chattanooga, Tenn., \$245 per ton; Houston, Tex., \$195 per ton.

Prices, f.o.b. shipping point for low salt grade will not exceed the following scheduled prices: Wichita, Kan., \$235 per ton; Port Edwards, Wis., \$205 per ton; Long Beach, Calif., \$285 per ton; Denver, Colo., \$315 per ton; Lemon, Ill., \$240 per ton; St. Louis, Mo., \$245 per ton; Houston, Tex., \$215 per ton.

The price for diaphram grade 73 percent liquid caustic soda has also been increased \$25 per ton, not to exceed the schedule price of \$245 per ton, f.o.b. Wichita, Kan.

Delivered cost on all grades of liquid caustic soda will be equalized with recognized competition at seller's option. When the surcharge tax is reauthorized, Vulcan will add the appropriate tax as a separate line item to all invoices.

SULFUR DIOXIDE — C-I-L Inc. says it is increasing its price for sulfur dioxide to \$230 per ton from \$220 per ton. The new price is effective October 1, and is f.o.b. Chicago.

Although C-I-L joins Stauffer Chemical (CMR, 8/18/86, pg. 28) and Cominco America (CMR, 9/1/86, pg. 31) in posting sulfur dioxide increases, a spokesman notes the increase is necessitated primarily to offset costs related to investment in new equipment.

C-I-L, he says, is in the process of relocating its railcar-to-tanktruck transfer facility to the site of its Chicago terminal in order to consolidate operations.

The company also recently purchased an additional tanktruck, which, he says, will help to maintain the company's high level of customer service.

C-I-L markets sulfur dioxide produced by Inco in Coppercliff, Ontario.

In a related matter, Stauffer Chemical Company notes that starting September 1 it is offering food grade liquid sulfur dioxide on a regular basis. Stauffer says the material meets all FCC requirements. It is priced at \$240 per ton, f.o.b. Hammond, Ind., Baton Rouge, La. and Houston, Tex.

Late last week Tennessee Chemical Com-

pany sold it will boost contract prices for bulk liquid sulfur dioxide shipped from Coopersburg, Tenn., by \$10 per ton, effective October 1 or as contracts permit. The action will raise Tennessee's list prices for liquid sulfur dioxide to \$230 per ton.

A Tennessee spokesman says the initiative represents the first industry price hike in 7 years. He says liquid sulfur dioxide costs have been increasing and that demand is strengthening.

The figures compare with the West European consumption of plastics generally during 1985 of 18.8 million tons as against 17.1 million tons in 1982. This represents a modest 3.7 percent average annual increase during the period.

Some of the highlights Bayer expects to show at the trade fair include liquid crystal polymers, thermoplastics such as polyphthalide sulfide and aromatic polyesters, a high heat-resistant, fully hydrogenated nitrile rubber called "Therban," paint raw materials aimed at coatings for plastics and car bodies and a high-performance glass fiber composite tradenamed "Polyval."

Emphasis across the product line will be, as in years past, on the three major end-use industries — automotive, electrical and electronic engineering and construction.

In the automotive area, the Rover 800 luxury car, which was launched in July and will be shown at K '88, uses Bayer engineering plastics in more than 25 individual applications in eight different areas of the vehicle. The Rover 800 is at this point the UK car with the highest proportion of Bayer engineering thermoplastics — each car containing a total of 24 kilograms, the company says.

If the field tests are successful, said Dr. Meeusen, the technology could be applied to citrus, cotton, soybeans, corn, tomatoes, rice, potatoes, wheat, sugar beet and cane, tobacco, timber and shade trees. The potential savings of insect-resistant plant to farmers worldwide could amount to hundreds of millions of dollars annually, the company claims.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

If the field tests are successful, said Dr. Meeusen, the technology could be applied to citrus, cotton, soybeans, corn, tomatoes, rice, potatoes, wheat, sugar beet and cane, tobacco, timber and shade trees. The potential savings of insect-resistant plant to farmers worldwide could amount to hundreds of millions of dollars annually, the company claims.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.

Moth caterpillars are the most destructive insects to world agriculture and forestry. Their common names include gypsy moth, cotton bollworm, cotton bollworm, cutworm, armyworm, corn ear worm, cabbage looper, spruce budworm and pine borer.</

Caustic Soda Beads

Sodium Nitrite

Potassium Nitrate



300 Madison Avenue, New York, N.Y. 10017 - Tel. 212-667-0000
GARAGE BROCHURE - Telex: 112-92-6250, 112-92-5900

Now a
new source
for
Synthetic
Magnesium
Silicate:

Silprec SM®

A product of
PQ Corporation

Distributed
in the U.S. by
Skyhawk
Chemicals

18211 Spellbrook Drive
Houston, TX 77084
Phone: (713) 463-3237

The PQ Corporation

Silprec SM® magnesium silicate is
produced by Arcillas Tlalitas, S.A.
Mexico, an affiliate of The PQ Corporation

USE THIS FORM FOR YOUR CMR CLASSIFIED AD

(Specify category-BUSINESS OPPORTUNITIES,
FACILITIES WANTED, EQUIP. OFFERED, etc.)

Copy _____

Terms: \$57.75 for first six words or less; \$6.75 for
each additional six words or fraction. Payable in advance
(not subject to agent's commission). No display. First two words price is bold face type. Copy
should be received before Wednesday noon preceding
the date of publication. Send to:

CHEMICAL MARKETING REPORTER
Classified AD Department
100 Church Street
New York, N.Y. 10007

More than
150
years
in the U.S.A.

All-Natural Chilean SODIUM NITRATE

from the world's most experienced supplier

Chilean Nitrate Sales Corporation
109 East Main Street, Norfolk, VA 23510
Phone: (804) 622-0600

technology for the group, says Bayer currently has two product groups that fall into the category — "Desmopan" polyurethane-based elastomers and "Lexaflex" cross-linked EPDM-polypropylene blends.

Though more than two decades old, the polyurethane product is experiencing a "renaissance," and "is well on its way to becoming the elastic material," he says, since its properties can be varied to make extremely elastic films as well as hard articles such as ski boots.

Hoechst officials told reporters at a "pre-K" briefing in Frankfurt that continued rationalization efforts in commodity plastic have led to a base on which the company believes it can build new core products.

The company has in recent years cut back its high-density polyethylene capacity by 95,000 tons, sold off the 145,000-ton low-density PE business and discontinued polystyrene production with total capacity amounting to 440,000 tons.

Hoechst's West European HDPE capacity now totals some 480,000 tons annually (880,000 tons worldwide), while polypropylene capacity is 385,000 tons in West Europe (435,000 worldwide) and polyvinyl chloride, made only in West Europe, totals 240,000 tons per year.

Gottfried Kremer, head of Hoechst's plastics and waxes division says the company is "competitive" in its worldwide HDPE business and has been increasing its share in such specialty areas as films and large-volume, blow molding and pipes. In polypropylene, he says Hoechst is participating in industry trends to more efficient catalysts together with adapted process engineering.

REINFORCED POLYPROPYLENE

Reinforced grades of PP qualify particularly as low-priced engineering resins and the Hoechst executive says "we are playing a decisive role in this development."

In PVC, Hoechst is a relatively small competitor, but the polymer is part of an integrated chloralkali system and is one of the raw materials for film production. The company is also set aside from much larger competitors by the wide range of grades it offers, with a high proportion of specialties produced by different processes.

Hoechst, too, plans to make engineering plastics a focal point of its activities over the next few years, following a worldwide trend to extending and diversifying polymer materials toward compounds, blends and alloys.

As an example, the Hoechst executive cites a new material the company has just started to sample — a polyester ketone ("Hostatec") — that is processed at about 400 degrees C and can be used at temperatures up to 250 degrees.

Although it's expected the growth of the market for engineering plastics will be rapid, Mr. Kremer says the quality that the market requires will continue to rise.

As a result, he says Hoechst will seek cooperative arrangements with competitive companies wherever there are prospects of opening up new markets. The company concluded an agreement with 3M in the field of fluoropolymers in May of this year and is planning a project in the area of chlorinated polyethylenes ("Hostapren") with DSM.

In terms of near-term capital spending, Mr. Kremer says a focal point will be the \$50 million expansion in fluoropolymer production at the company's Gendorf works and restructuring of the polypropylene production which is likely to require some millions of dollars in the course of several years.

Although the company has not detailed its spending plans for engineering resins, Mr. Kremer says Hoechst's program "will require large sums of money and will certainly

take more than a decade to complete." In regard to polycaprolactam ("Hodistorm"), rationalization and steps to improve quality are already underway and should lead to a slight increase in capacity. A decision is expected in 1987 on an important step toward expansion, Mr. Kremer says.

Looking at world markets for plastics, Peter Cron, head of the plastics and sales department, noted that world consumption of commodity plastics has risen from 16 million tons to 49 million tons since K-81, an annual growth of 5.5 percent.

In spite of the fact that growth prospects generally appear favorable, he says structural changes that have taken place indicate a no-growth situation for commodities in traditional markets. "With average growth rates of less than 2 percent over the next ten years, the share of the major industrial centers in world market consumption will show a marked decline," he says.

In Europe, traditional export surpluses are showing a sharp decline. Whereas exports of commodity plastics from European industry exceeded 1.85 million tons in 1982, it's expected the figure will have fallen by almost 50 percent in 1980 due to the rise of Canadian and Middle East production. At the same time, Mr. Cron says it is difficult to understand the stir created among West European producers last year over imports from Saudi Arabia.

"We have fairly reliable grounds for assuming that in 1985 no more than 40,000 tons of HDPE and 120,000 tons of LDPE came from Western Europe. This compares with a total consumption of 1.9 million tons of HDPE and 4.4 million tons of LD/LLDPE, respectively," he says.

This year Hoechst expects imports from Saudi Arabia to amount to 80,000 tons of HDPE and 210,000 tons of LDPE — still the reason for the nervousness shown," the Hoechst executive says.

For the future, Mr. Cron says rapid growth, innovation and pioneering development will rest with the engineering resins. He expects consumption in West Europe, the US and Japan to more than double from last year's 1.4 million tons to 2.8 million tons in 1993. Leading the way, according to Hoechst, will be polyacrylate, projected to grow from 500,000 tons last year to 800,000 tons in '85 and polycarbonate, increasing from 300,000 tons to 580,000 tons.

Inspiration Sells Utah Coal Unit

Inspiration Resources Corporation has completed the sale of all of its remaining interest in a Utah coal property to Sunoco Energy Development Company, a subsidiary of Sun Company, Inc. ICR expects to report a \$13.25 million gain on the sale as income in the third quarter of 1986.

A subsidiary of ICR originally had 51% of Sunedco, an interest in the Ferron Creek coal property in 1981. The sale of all of the ICR subsidiary's interest in the property resolved a dispute concerning its development that arose in 1985.

Inspirational Resources Corporation, which had 1985 revenues of \$1.1 billion, is a diversified natural resources company with interests in products and services for agriculture and the mining of base and precious metals and coal.

Its sub-subsidiaries include Terra Internation, Inc., Inspiration Consolidated Copper Company, Hudson Bay Mining and Smelting Co., Limited and Inspiration Coal Co.

Although the company has not detailed its spending plans for engineering resins, Mr. Kremer says Hoechst's program "will require large sums of money and will certainly

COATINGS & PLASTICS

Polystyrene

Continued from Page 3

prices were only partially successful. There was a move to raise prices by 4 cents per pound in January and February. By March, prices had advanced by an average of only 1 1/4 cents per pound, because many large-volume accounts refused to pay higher prices in light of lower raw material costs.

In June, styrene monomer producers announced a 2-cent-per-pound increase, and polystyrene makers were quick to follow with price increases of their own, moving high-impact and general purpose grades up an additional 2 to 3 cents per pound.

Despite the fact the styrene increase failed to hold, polystyrene producers describe the July increase as successful — impossible margins led them to walk away from customers who refused to accept the increase, until all accounts adopted it.

Recent changes in crude oil values brought on by OPEC's move to limit production by September of this year have, so far, had a real impact on perceived styrene values. The recently announced September styrene monomer price increases are expected to hold, and function as a catalyst for the primarily demand-driven increase, producers say.

GROWTH FORECAST

Earlier forecasts predicted 4 to 5 percent overall growth. By the second quarter, demand was perceived to be up by 5 to 8 percent over last year's levels. Summer demand for the resin was expected to maintain this level of growth as lower fuel costs were predicted to boost the number of driving vacations and hence demand for disposable polystyrene containers (CMR 8/2/86, pg. 30).

Second quarter demand levels exceeded even these projections, producers report, citing SPI year-to-date figures for June. Total demand (including the market for EPB and flame-resistant and other specialty grades) increased 8.1 percent from 2.04 billion pounds in 1985 to around 2.21 billion pounds.

Sources describe total demand for general purpose and impact molding and extrusion grades of solid polystyrene, including exports, as up by almost 11 percent overall during the first half of the year, moving from around 1.77 billion pounds to roughly 1.90 billion pounds.

Of this figure, individual demand for molding grades was up 10.2 percent to 98.7 million pounds and extrusion demand up 12.4 percent to 86.9 million pounds. Exports for straight polystyrene shot up 20.3 percent and those for rubber-modified grades up 40.3 percent.

Only the bead and compounding polymers segments, relatively small portions of the total market, declined. The market for EPB used in thermal-insulation and in

Continued on Page 52

COATING & PIGMENT IMPORTS: JUNE

CENSUS BUREAU REPORTS ON THE TOP PAINT MATERIALS

	JUNE 1985	QUANTITY	\$ VALUE	QUANTITY	\$ VALUE
Anhydrous oxide	3,462,881	2,631,788	2,787,059	1,794,370	
Carbon black	8,538,388	2,409,031	8,204,946	1,822,760	
Chlorine colors					
Chlorine oxide green	566,881	869,897	228,578	230,391	
Chlorine oxide orange	149,428	148,017	117,500	118,884	
Chlorine oxide yellow	389,887	283,983	206,940	142,145	
Molybdate orange	155,172	155,282	98,828		
Zinc yellow	260,898	75,422	15,469	185,781	
Cobalt Oxide	6,947	6,947	60,000	69,978	
Copper Oxide	99,008	75,153	522,511	627,384	
Iron blues	276,869	343,698	49,000	5,298	
Iron oxides, hydroxides, matal	64,200	6,043	49,000		
Synthetics					
Black	264,284	68,416	141,732	38,388	
Red	104,754	249,198	1,163,234	573,387	
Yellow	1,787,731	388,387	2,242,518	495,222	
NBPF					
Lignite	1,654,943	1,205,167	1,616,174	1,061,588	
Red Lead	1,403,508	248,276	1,285,913	522,728	
Shades, bleached	207,917	172,174	95,083	17,539	
Black button/oil, other lac.	142,899	289,223	80,085	77,182	
Steel lac.	235,377	338,650	827,118	577,182	
Mineral dioxides	38,941,266	22,048,232	28,842,500	16,504,383	
Ultramarine blues	855,143	621,671	437,777	451,765	
White fine blues	172,193	118,856	1,157	5,359	
Zinc Oxide (feed free)	5,461,146	1,758,426	2,228,570	2,068,866	

We specialize in chlorinated olefins and paraffins...

for low-cost flame retardant needs

Dover offers one-source supply for chlorinated additives — paraffins, olefins and fatty acids. Consistent, high-quality products are assured by rigid standards and a modern quality-control laboratory.

Sophisticated R & D laboratories supported by a highly competent technical staff allow Dover to produce high-quality products.

Fast delivery is assured by our own large fleet of trucks or factory-loaded rail cars. For details and the name of your nearest distributor, call (216) 343-7711 or write:

DOVER CHEMICAL CORP.
DEPT. DV-42
26 Broadway, Suite 1820
New York, N.Y. 10004
TELE: 212-785-0108 TELEFAX: 212-425-2546

**We can offer best quality products
at very competitive prices:**

INTERMEDIATES - R. Sulf, Misanilic Acid, Sulfuric Acid, Neptus, Rescive, Solvent
TERPENES - 5-Sulf Anthranilic Acid, Vinyl Sulfone Esters (Acetanilidic Base).

For Further Details Please Contact:

HARBON INTERNATIONAL, INC.
Harbon International, Inc.
26 Broadway, Suite 1820
New York, N.Y. 10004
TEL: 212-785-0108 TELEFAX: 212-425-2546

PLASTICIZER 8
(N-ETHYL O/P TSA)

PLASTICIZER 9
(N-CYCLOHEXYL)

PLASTICIZER 1-H
O/P TSA

from the flexible supplier

Contact:
(914) 769-9110
TX - 229639 RTCH LR

Pleasantville, NY

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and Lt. drum prices are 2c. per lb. higher.

Chlorinated rubber, 5, 10, 20 cps., bgs., t.i., divd. 1.68 -

40 cps., bgs., Lt. divd. 1.82 -

125 cps., bgs., Lt. divd. 2.00 -

300 cps., bgs., Lt. divd. 2.75 -

Chlorine, 100% simple works, t.o.s., tri. aquad. ton 195.00 200.00

Chloroacetic acid, mon. high purity, t.lake, 98% bulk t.o.b. works. 56 -

2-Chloro-4-aminobutene, tech., t.i. dms., cl. 11, t.o.b. works. 1.68 -

o-Chloroform, liquid, dms., cl. 11, t.o.b. works. 1.83 -

p-Chloroform, cl. 11, t.o.b. 1.55 -

t.lake, dms., cl. 11, same basis. 2.00 -

o-Chlorobenzaldehyde, dms., t.i. works. 2.45 -

p-Chlorobenzaldehyde, dms., 2,000 lbs. or more, works. 3.84 3.85

o-Chloroform, liquid, dms., 500-lb. lots or more, works. 1.68 2.25

Chloroform, tech, tanks, divd. 34% -

NF tanks, min. consumer, 4,000 gals., divd. 35% -

2-Chloro-4-nitroso, peste, commodity basis, dms., t.i. 3.08 -

4-Chloro-2-nitroaniline, pass, 172.5 mol. wt. commodity basis, t.i. 2.25 -

o-Chlorophenol, dms., t.i. 2.70 -

p-Chlorophenol, dms., t.i. 2.00 2.40

o-Chlorophenol, dms., t.i. 1.25 1.70

Chloroparaffin, 1,500-2,000 cps., t.o.b. works. 1.25 -

Chlorosulfonic acid, tanks, t.i. equal. 1.18% -

p-Chlorotoluene, tech, tanks, t.i. equal. 1.00 -

Chloroacetic, dry, 40,000,000 units per gram, dms., 24.00 -

Choline chloride, crystal, 99%, t.o.b. 6.90 -

Choline chloride, feed grade, 70% aqueous, t.i. 1.11, divd. E of Rockies. 28 -

80% dry supplement. 39 -

Choline chloride, 80% dry supplement, bgs., 50,000 lbs. min. lots, t.o.b. Springfield, Mo. 40 -

Choline chloride, pharmaceutical, 50 klo. lots, t.o.b. Springfield, Mo. 5.00 -

Choline dihydrogen citrate, 88% min., 50 klo. lots, t.o.b. Springfield, Mo. 8.00 -

Chromic acid, CP extra light, bgs., t.i. equal. 1.68 -

medium, bgs., same basis. 1.72 -

extra deep, CP, same basis. 1.74 -

Chrome orange, CP, bgs., divd. E of Rockies. 83 .89

Chrome orange, CP bgs., divd. E of Rockies. 1.09 1.18

Chromic acid, 90.5%, flake dms., t.i. equal. 1.18 -

ord. same basis. 1.25 -

Chromium acetate, 71% dms., 500-2,000-lb. lots, works. 1.10 -

Chromium fluoride, dms., t.i. 81 -

Chromium nitrate, dms., t.i. 1.45 -

10% metal soln., 500-lb. dms. same basis. 74 -

Chromium oxide, hydrated, 50-lb. bags, cl. 5.50 -

pure, bgs., t.i. 2.00 -

Chromic anhydride, dms., t.i. 1.45 2.45

Chromic acid, 25% dms., t.i. 4.50 -

Cinnamal, H₂. 1.05 1.10

Cinnamon bark oil, bale. 88.00 95.00

Cinnamom leaf oil, dms. 2.80 -

Citral, nat. dms. 6.50 8.85

syn., 55-lb. dms., t.o.b. 3.18 -

Citric acid, USP, hydrous, gran., 250-lb. bags, t.i. 1.18 -

lime, t.i. 1.18 -

Citric acid, 99.5%, powder, cl. 1.18 -

Clay ball, dom. air floated, bgs., t.i. 500.00 -

Tenn., cl. 11, cement, moisture repeat. 49.00 -

dom. calcined, t.i. 49.00 -

air, bals., t.i. 49.00 -

Clay Crina (see Kaolin). 24.00 -

Cleat, naphtha, 140° flesh tanks, New Jersey or New York, divd. 1.40 -

Clove leaf oil, Indonesian, reg. dms., bgs. 2.65 3.25

Madagascar, reg. 4.40 -

Clove bud oil, 2.00 -

Cloves, Brazil. 4.20 -

Cameroon, 2.20 -

Madagascar. 2.20 -

CMC, technical, 80% minimum, low or medium vis., bgs., 24,000-lbs., t.o.b. Hopkin's, Va. 100% base. 1.25 -

detergent makers, t.o.b. manufac-

turing point. 1.25 -

CMC, pur., high vis., (see Cellulose gum).

Coatite pitch, inclust., lg. works ton 250.00 255.00

roofing, 140-155, Federal speci-

cation RP-381 Type 1, bals. 380.00 -

Cobalt acetate, dms., cl. 11, t.o.b. works. 3.51 4.25

Cobalt carbonate, powd., t.i. 8.81 8.16

tanks, divd. 8.81 -

Cobalt chloride, dms., 5,000 lbs. or more, t.i. equal. 4.15 -

Cobalt hydrate, dms., t.i. 8.20 10.55

Cobalt metal, 99.5-99.8%. 250-kilo. dms., t.o.b. N.Y. Chicago. 11.1, t.o.b. 11.10 -

Cobalt nitrate, dms., t.i. 8.78 -

Cobalt phosphate, 32.1% Co. dms., divd. 1.35 -

Cobalt resinate fused, 3% Co. dms., t.i. 3.85 -

Cobalt sulfate, cryst., 10,000 dms., t.i. 2.81 3.54

or more, t.i. equal. 4.58 6.02

Cobalt sulfate, mixed isomers, tanks, t.i. 2.18 -

Cocaine bark, bals. 1.40 4.45

Cocoanut oil, 2.10 -

Coconut Oil (See Oils, Fats & Waxes market report).

Coconut oil, cold, distilled, t.i. 1.52 -

Coconut oil, 52. 58

double distilled, same basis. 54 -

Cod oil, t.o.b. Gloucester, Mass. 1.87 -

Note: Tankcars also require written authorization by Alcohol and Tobacco Tax Division.

Denatured alcohol, ethyl. 1.87 -

Dodecylbenzene, tanks, t.o.b. 1.87 -

Dodecylbenzene, NF, 25-kilo lots, kilo. 900.00 -

Dodecylbenzene, tank, t.o.b. 1.87 -

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and ask prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An Index of weekly chemical market reports is on the back cover.

A

A		ABBREVIATIONS					
bies siberica oil, cns.	lb. 15.00	-	Alumina, activated, Gran., 100-lb. bgs., 40,000-lb. min. c.i. works. ton calcined, bulk, same basis	821.00	-	Ammonium sulfide, 100-lbs. works	18.00
cetaledehyde, 99%, tanks, frt. alid. lb.	.37	-	ton 864.00	-	USP, gran., dms. . . . .	.40
Prices 1c higher in West.			ton 380.00	-	Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works	53	
cetaminophen (see N-Acetyl-p-aminophenol)			ton 190.00	-	Ammonium dimolybdate, approx. 85%, 24,000 lbs. or more. lb.	2.70	
cetanilide, tech., flaked, bgs, I.I., f.o.b. works	1.29	-	ton 224.00	-	Ammonium diacetate, tech., dms., c.i., I.I., works, frt. equid. lb.	5.48	
cetic acid, tech., tanks, dmd. E . . . . .	.25	-	Aluminum acetate, basic, dms., I.c.i., works	3.25	Ammonium heptamolybdate, cryst. dms., 24,000 lbs. f.o.b. works	1.70
cetocinnhydrate, tanks, dmd. E . . . . .	.43½	-	Aluminum chloride, anhyd., soin., 600-lb. bgs. c.i., I.I., works, frt. equid. lb.	.50	Ammonium heptamolybdate, cryst. dms., 24,000 lbs. f.o.b. works	5.57
Acetocinnhydrate prices 1c. higher in West.			bulk, same basis . . . . .	.55	Ammonium lauryl sulfate, tanks, I.O.B. works . . . . .	.29
cetoacetanilide, dms., I.I., dmd.	1.20	-	semi-bulk bgs., same basis . . . . .	.45½	Ammonium lignin, sulfonate, bulk, 1.0.b. Hougham, Ore.	32
cetoacel-o-antialdehyde, dms., I.I., dmd.	2.70	-	Aluminum chloride, com., soin., 32° tanks, works	15.00	Ammonium nitrate, dom., fertilizer grade, 33.5% N, bulk, S.E. dmd.	72.00	
cetoacel-o-chloroanilide, dms., I.I., dmd.	2.85	-	ret. dms., c.i., works	12.00	Ammonium oxalate, tech., fine, gran. 300-lb. dms., I.I., f.o.b. works	130.00	
cetoacel-o-isobutylidene, dms., I.I., dmd.	1.50	-	non-ret. dms., same basis	20.00	Ammonium pentaborate gran. bgs., c.i., works	135.00	
cetoacel-m-xylylidene, dms., I.I., dmd.	3.33	-	Aluminum formula, dibasic, liq. 8% Al ₂ O ₃ I.I., works . . . . .	.55	Ammonium pentaborate, lb.	1.42
acetone, tanks, dmd. E . . . . .	.25	-	Aluminum hydrate (see Aluminum, hydrated)		Ammonium pentaborate powder 20c. per lb. higher	1.58
dmd. Zone 2 (Cart.) . . . . .	.27	-	Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.i., I.I., works	2.75	Ammonium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. works . . . . .	.75
Zone 3 (W. of Rockies excluding Calif.)			Aluminum metal, 99½% or more, 50-lb. pigs., 30,000-lb. lots, I.O.B. alid.	3.50	Ammonium phosphate (see Di- and monocalcium phosphates).		
acetone, tanks, frt. alid. . . . .	.27	-	Aluminum oxide amorphous (see Aluminum, calcined).		Ammonium silicofluoride, dms. c.i., I.I., works . . . . .	.30½
acetophenetidin (see Phenacetin).			Aluminum paste, leafing grade, atd., lining, 2,400 lb. lots, dmd.	1.40	Ammonium sulfate, liq. gran., bulk, c.i., std., com., bulk, f.o.b. works . . . . .	.58
acetophenone, tech., tanks, I.O.B. works . . . . .	.78	.66	lining, extra-line, same basis	1.99	55-lb. bgs., same basis . . . . .	.58½
perfume grade, extra, cns.	2.15	-	Aluminum sulfonate, purif., 100-kilo dms., I.I.,	8.48	Ammonium sulfate, liq., 40-44% tanks, 100% basis, I.O.B. works	80.00	
N-Acetyl-p-aminophenol, c.i., I.I. works	5.95	6.64	Aluminum powder, leafing grade, std. lining, 2,400 lb. lots, dmd.	3.17	ton 90.00	ton 50.00	
cyclene black, imp., 50% compressed, 12½-lb. bgs. c.i., I.I. frt. extra . . . . .	.96	-	extra fine, lining, same basis	4.04	ton 70.00	ton 108.00
100%, 25-lb. bgs., same basis . . . . .	.95½	-	Aluminum stearate, bgs., c.i., I.I., works	1.25	Ammonium sulfide, liq., 40-44% tanks, 100% basis, I.O.B. works	460.00
cyclene tetrabromide, tanks, I.O.B. works . . . . .	.97	-	Aluminum sulfate, com., grd., 100 lb. bgs., c.i., works, frt. equid. basis 17% Al ₂ O ₃ , East and Gulf Coast	186.00	ton 120.00	
cetylalicylic acid, USP (see Aspirin).			ton 217.80	-	Ammonium thiocyanate, tech. (see Ammonium thiocyanate).		
cetylbutylyl citrate, bulk, I.O.B. works	1.28	-	liq., tanks, N.E. same basis	145.00	Ammonium thiocyanate, tech., cryst., bgs., c.i., works	1.02	
cetyltriethyl citrate, bulk, I.O.B. works	2.06	-	300.00	-	tech. soh., 60% tanks, I.O.B. equid. . . . .	.93
crolein, tech., tanks, works . . . . .	.62	-	ton 225.00	.337	Ammonium thiocyanate, photographic, 60%, tanks, I.O.B. works . . . . .	.13
acrylonitrile acid, I.I. works	1.00	-	ton 9.60	10.10	Ammonium zirconyl carbonate, soln., bulk . . . . .	.72
soin, 100% basic tanks, works . . . . .	.74	.77	ton 5.79	-	Amyl acetate, primary mixed isomeric tanks, dmd. . . . .	.57
Acrylic acid, glacial, reg., tanks, dmd. . . . .	.87	-	ton 1.33½	-	Amyl alcohol, primary mixed isomers, tanks, I.O.B. . . . .	.48½
tech., tanks, frt. alid. . . . .	.80	-	ton 1.05	-	Amyl cinchamic aldehyde, dms.	2.35
Acrylonitrile, tanks, works . . . . .	.38½	.45½	ton 1.82	-	p-tet-Amylphenol, bulk, works . . . . .	.81
Acrylonitrile-butadiene-styrene resin, high-impact, nat. I.I. dms., dmd.	1.09	1.12			Amyl oil, dms.	11.50	
medium-impact, nat., same basis lb. low-impact, nat., same basis lb.	1.05	1.08			ton 12.20		
Acrylic acid, resin grade, bulk, hopper cars, frt. equid. . . . .	.98	1.01			Anethole, tech., dms.	10.20
bgs., I.I., c.i. frt. equid. . . . .	.57	-			USP, dms.	3.65
Agar USP, powd., 80 to 100 mesh, dms. . . . .	.59	-			Angelica root oil, bogs.	700.00
C-12 to C-13, tanks, dmd. . . . .	.57	.58			Aniline, tanks, I.O.B. . . . .	.39
C-14 to C-15, tanks, dmd. . . . .	.57	-			Aniline oil, dms.	11.75
emulsion, tanks, tankwagons, E. Coast.					Angeline, tanks, I.O.B. . . . .	.38½
steam-railed, 40-300 penetration, tanks, tankwagon					Aniline oil, dms.	100 lbs.	
steep roofing grade, bulk tankwagon,							
Aspirin, USP, cryst., powd., 250-lb. dms., c.i., I.O.B.							
10% starch granulation, white, 250-lb. dm. c.i., I.O.B.							
15% starch granulation, white, same basis							
Freight equid. ship. Identical quantity overland from N.Y., Phila., Midland, Mich., Chicago, Louis.							
Atropine sulfate, USP, bots. oz.							
Avocado oil, dms.							
Azelaic acid, tech., 50-lb. bgs., I.I., c.i., dmd.							
Azo orange, bbls., dmd.							
Azo yellow, 10 G. bgs., dmd. E. of Rockies							
Azo Yellow pigment, bgs. same basis							

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

a/alpha								
solid/allowed	C./Centigrade	E./Esel	incl./included	o-/ortho	secs./seconds			
amorph./amorphous	cbsa./carboys	e.p./end point	indust./industrial	ord./ordinary	sp.g./specific gravity	Soph., cryst. 500 gms. or more...gm.	5.60	-
AMP/American melting point	c.o./cubic centimeters	equatl./equalized	kgs./kegs	oz./ounce	ship./shipment	Bismuth nitrate Diphenyl,		Cad.
anhyd./anhydrous	CD/completely denatured	exp./expressed		P/phosphorus	sln./solution	Bismuth nitrate, purif. cryst., 100-lb.		Cad.
AOAC/Association of Official Agricultural Chemists	0.11./cost insurance freight	extr./extracted	t./sevo	p./pure	std./standard	lime, lrt. squid....lb.	10.00	Cad.
a.p.s./aveable phosphoric acid	c.l./carload	F./Fahrenheit	lb./pound	Peo./Pacific	syn./synthetic	Bismuth oxychloride, 100-lb. dms. works	17.20	Cad.
approx./approximately	cma./cena	f.b.s./free alongside	l.c./free carload	pho./phosphate		Bismuth subcarbonate, USP, medium	16.31	Cad.
artif./artificial	coml./commercial	ferment./fermentation	l.t./free truckload	photo./photographic		powd., 225-lb. dms. works lb.	15.50	Cad.
ASTM/American Society for Testing & Materials	cone./concentrated	f.c./free from chlorine	lg./liquid	pkgs./packages		Bismuth subnitrate NF, powd., 200-lb. dms. works	10.50	Cad.
b/beta	cp./chemically pure	f.l./free from prussic acid	m-/meta	powd./powdered		blanched, purif. powd., 50-100-lb. dms. works...lb.	14.46	Cad.
Be/Baume	cpe./centipoise	fb./fiber	m.a.p./mixed aniline point	precip./precipitated		Bismuth bromide, reagent, 100-lb. dms. works	17.00	Cad.
bols./barrels	cryst./crystalline	f.o.b./free on board	mag./microgram	prod./producer		Bisphenol-A, epoxy grade, hopper car, dhd.	15.00	Cad.
b.g./beta-gamma	cs./cases	f.p./freezing point	min./manufacturers	pt./point		polycarbonate grade, semi basic	.67	Cad.
bis./bases	ctns./cartons	frt./freight	min./minimum	pulv./pulverized		Basic, syn., imp., bags	.71	Cad.
bots./botolis	cyls./cylinders		moln./molten	puri./purified		Bols de rose oil, Braz., dms.	.20	Cad.
bots./bottles			m.p./melting point	reflat./reflacted		Paraffin, dms.	10.76	Cad.
b.p./boiling point				refd./refined		PCN (one per 48) dms., Int. std. (red 27-dm.) same basis	10.76	Cad.
b.p.t./bonde phosphate of lime				refy./refinery		(red 27-dm.) same basis	7.25	Cad.
b.r./boiling range				reasd./reassembled		Bonesmal, steamed, dom., bge., cl.	8.50	Cad.
b.s./boiling				ret./returnable		f.o.b. Midwest plants	180.00	Cad.
b.t./boiling point				SD/specialty denatured		Bone phosphate, defluorinated oil lime (see Defluorinated phosphate).		Cad.
b.p.t./bonde phosphate of lime				s.d./simple distilled		Bone phosphate, precip. (see Calcium phosphate trisulfate).		Cad.
b.r./boiling range				No./number		Boron, tech., abstr. 100-lb. dms.		Cad.
b.s./boiling				Nom./nominal				

bx., boxes
dms., drums
dom., domes.
percentage figure of the basic constituent multiplied by the unit-fair price shown in Chemical Reporter gives the price of 2,000 pounds of the material.

CaCO₃, sp. gr. 2.70 (see Calcium phosphate tribasic).
works, works, 60c, bgs., c. l.,
bulk, c. l., works, ton, 647.00

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1964

WEEK ENDING SEPTEMBER 3, 1962			
carbon Black, low structure, bulk, c.l. works.	.240	2	
bags, c.l. works	.270	2	
intermetallic-super-abrasion (ISAF).	.25	-	
bgs., c.l. works	.28	-	
super-abrasion (BAF), bulk, c.l., works.	.81	-	
bgs., c.l. works	.4050	-	
semi-reinforcing (SRF), bulk, c.l., works.	.210	-	
bgs., c.l. works	.240	-	
carbon black, thermal, medium, bgs., c.l. works	.30	3	
bulk, c.l. works	.32	3	
carbon black oil, b.o.b. Oulf refineries.	10.50	12.5	
1.o.b. W. coast refineries	10.50	12.5	
carbonyl disulfide, t.c., f.o.b. works ton	420.00	-	
carbon tetrachloride, CP, consumers, dms., c.l. frt. alld.	.38	-	
tech., dms., c.l.i.l., frt. alld.	.31	-	
tank transport (min. 4,000 gals.) frt. alld.	.24	-	
Cerboxymethyl cellulose (see CMC).			
Cardamom oil, NF, bgs.	.1b.		
Cardamoms, decor, Guatemalan, lb. green, Guatemalan, bgs.	.1b.		
Carmine, No. 40, NF, bulk, 100-lb. lots or more, divd.	135.00	140.	
Carnauba wax, Paranaiba, No. 1, yellow, bgs., ton lots	.1b.	1.95	2
Caixa, No. 1, yellow, bge., ton lots	.1b.	1.75	1
North Country, No. 2, refined, bgs., ton lots	.1b.	1.55	1
Carnauba wax, North Country No. 3, centrifuged, bgs., ton lots	.1b.	1.10	
North Country, No. 3, rfd/med, bgs., ton lots	.1b.	1.30	
Powdered carnauba wax, 20 to 100 mesh, 20c. per lb. Higher			
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, .33 lbs. or more, lb.	32.75		
b-Carotene, liq. in vegetable oil, 500,000 A units per gram, .33 lbs. or more, lb.	40.75		
b-Carotene, dry, beads, 0.05, 167,000 A units per gram 50-lb. cans	26.85		
d-Carvone, 25-lb. dms., syn.	.4800		
L-Carvone	.700		
Cascara sagrada bark, bulk	.1b.	1.00	
Cesolin, Imp., ecld-precip., grd. 30-mesh, Austria/ren, edible, same basic, c.l.	.1b.	1.45	
Australian, Indust, same basic, c.l.	.1b.	1.365	
Cassase acid, 303 mol. wt., dms., frt. alld., 100% basis	.1b.	3.70	
Cassia, Korintji "A" bgs.	.1b.	.95	
"B" bgs.	.1b.	.72	
Castor oil, raw, No. 1, Braz. tanks, USP 5-9 dms.	.1b.	.32	
rfd. dead, 5-9 dms.	.1b.	.74	
blown, 5-9 dms.	.1b.	.78	
dehydrated, boiled, tanks	.1b.	.75	
dehydrated, unbodied, tanks	.1b.	.74	
Castor oil, acid dehydrated, dms.	.1b.	.85	
nicotinic acid	.1b.	1.10	
Castor pomace, bgs., container load, 1.o.b., Miami, Fla.	ton	7.95	
Castorum, nat., crs.	.1b.	16.00	
syn. cans	.1b.	18.00	
Catechol, CP, 45-lb. dms., 50-239 dms., f.o.b.	.1b.	11.00	
tech., bgs., 1-lb. same basis	kilo	7.93	
Causilopolash (see Potash, caustic).		3.71	
Caustic soda (see Soda, caustic).			
Cedareel oil, dms.	.1b.	17.50	
Cedarwood oil, Texas, dms., cans	.1b.	3.50	
Virginia	.1b.	3.70	
Cedrol, prime dms.	.1b.	5.25	
Cetyl acetate, dat., dms.	.1b.	4.26	
Celery seed, Indian, bgs.	.1b.	.48	
Celery seed oil	.1b.	60.00	
Cellulose acetate, powd., bgs., f.t. divd. E.	.1b.	1.30	
Cellulose acetate butyrate, powd., 17% butyl content, bgs., f.t. divd. E.	.1b.	1.75	
58% butyl content, bgs., divd. E.	.1b.	1.58	
50% butyl content, bgs., divd. E.	.1b.	1.81	
55% butyl content, bgs., divd. E.	.1b.	1.83	
Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works			
1.o.b. Hopewell, Va.	.1b.		
std., low or medium vis., bgs., c.l.			
11, 1.o.b. Hopewell, Va.	.1b.	1.60	
Cellum concentrate CeO ₂ , 50 lbs.	.1b.	1.35	
Cellum hydroxide 90% CeO ₂ , dms., works	.1b.	1.40	
77% CeO ₂ , dms., works	.1b.	4.20	
Cellum oxide, optical grade, bgs., 50-lb. lots or more, divd.	.1b.	1.85	
Cetyl stearate, NF, cans, c.l., divd. E. lb.	.1b.	.88%	
Chalk (see Calcium carbonate).			
Chamomile flowers, Hungarian, cs.	.1b.	4.25	
Roman, cs.	.1b.	4.94	
Egyptian, whole	.1b.	2.70	
Chamomile oil, blue, Egyptian	.1b.	645.00	
blue, Hungarian	.1b.	370.90	
Chenopodium oil, NF, cans	.1b.	15.00	
Chicago acid, dry, bgs., f.t. std.	.1b.	13.50	
Chiles (see Pepper, red).			
Chlorendic anhydride, tech., dms., f.t. works	.1b.	1.30	
Chlorinated paraffin, 40% chlorine, bulk, divd., Zone 1	.1b.	.45	
50% chlorine, same basis	.1b.	.46	
60% chlorine, same basis	.1b.	.48	
70% chlorine, resinous, 50-lb. bags, c.l., divd., Zone 1	.1b.	.69	

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and
Zone 3 prices are 2c. per lb. higher and L.L. drum prices
are 5c. per lb. higher.

Chlorinated rubber, 5, 10, 20 cps., bgs.
11. div'd. 1.68 -
40 cps., bgs., l.l. div'd. 1.02 -
125 cps., bgs., l.l. div'd. 2.50 -
300 cps., bgs., l.l. div'd. 2.75 -

Chlorine, tank, single unit, works,
l.o.b., f.r.t. equal'd. ton 185.00 200.00

Chloroacetic acid, mono, high purity,
(alko. 99% min.), bgs.
works. 1.56 -

2-Chloro-4-aminotoluene, tech., liqu.
dms., c.i., l.l. o.b. works. 1.68 -

p-Chloroaniline, liquid, dms., c.i., l.o.b.
works. 1.63 -

tanke, same basis. 1.55 -

p-Chloroaniline, solid, l.o.b. 1.70 -

alko., l.l. same basis. 2.00 -

o-Chlorobenzaldehyde, dms., c.i., l.o.b.
works. 1.24 -

p-Chlorobenzylidene, dms., 2.000
lbs. or more, works. 3.64 3.65

p-Chlorobenzoic acid, dms., l.l. wks. 3.90 -

o-Chlorobenzoic acid, dms., l.l. wks. 1.89 2.25

Chloroform, tech., tank, 100-lb.
works, tanks, div'd. 34/4 -

NF tanks, min. consumer, 4.000
gals. div'd. 35/4 -

2-Chloro-4-nitrophenol, paste, com-
modity basis, dms., l.l. t.o.b.
works. 3.15 -

4-Chloro-2-nitrophenol, paste, 172.5
min. commodity basis, dms., l.l. t.o.b.
works. 2.25 -

o-Chlorophenol, dms., c.i., f.r.t.
equaled. 2.70 -

p-Chlorophenol, dms., c.i., f.r.t.
equaled. 2.00 2.40

Chloropicrin, com., 100-lb. 1.25 -

Chloropicrin, com., 500-lb. cyls., l.o.b.
works. 1.25 -

Chlorotoluene, tech., l.o.b.
works. 1.16/2 -

p-Chlorotoluene, tech., tanks.
works. 1.60 -

Chlorotoluene, dry, 40,000,000 units
per gram, kilos. 24.00 -

Choline bitartrate, cryal., 98% min., 50
kilo. tons, l.o.b. Springfield, Mo.
works. 6.00 -

Choline chloride, 99% min., 50
aqueous, l.c., 1f. div'd. E of
Rockies. 2.8 -

60% dry supplement. 3.8 -

Choline chloride, 60% dry supplement,
bulk hogger cars. 3.9 -

bgs., 50-lb. bgs. my. 4.0 -

Choline chloride, pharmaceutical, 50
kilo. tons, l.o.b. Springfield, Mo.
works. 6.00 -

Choline dihydrogen citrate, 98% min.,
50 kilos, l.o.b. Springfield, Mo.
works. 5.00 -

Choline green, CP extra light, bgs.
c.h.d. E of Rockies. 1.88 -

light, bgs., same basis. 1.70 -

extra dry, CP, same basis. 1.72 -

Chromic orange, CP, bgs., div'd. E of
Rockies. 1.83 .89

Chromic yellow CB bgs., div'd. E of
Rockies. 1.09 1.16

Chromic acid, 68.4%, halo dms., c.i.,
grd. same basis. 1.18 -

Chromium acetate, scin., 70% dms.,
500-2,000-lbs. works, l.o.b. 1.10 -

Chromium fluoride, dms., l.l. 1.61 -

Chromium nitrate, dms., l.l., o.b. 1.45 -

10% min. soot, 500-lb. bgs. same
basis. 1.74 -

Chromium oxide, hydrated, 50-lb.
bgs., c.i. 1.74 -

Chromium oxide, 50-lb. cyls., l.o.b.
works. 1.90 2.00

Cinnamaldehyde, cinn. dms., 1.85 2.45

Cinnamyl alcohol, 25-lb. bgs. 4.80 -

Cinnamon, 1/2. 1.10 -

Cinnamyl oil, pure, 68.00 90.00

Citric acid, 99% min., 500-lb. bgs. same
basis. 2.80 -

Citric acid, 99% min., 500-lb. bgs. same
basis. 5.60 6.85

Citric acid, USP, hydros., 250-lb.
bgs., l.l. 1.16 -

Citric acid, USP, anhyd., gran. 250-lb.
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

Citrus oil, citron, pectin, higher
dm's., l.l. 1.16 -

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

Hydrochloric acid, 20° Ba, tank cars, works, East	ton	65.00	65.00
Midwest	ton	60.00	70.00
Gulf Coast	ton	67.00	-
West Coast	ton	90.00	105.00
22° acid, same basis, East	ton	68.00	78.00
Midwest	ton	66.00	70.00
Gulf Coast	ton	63.00	-
West Coast	ton	100.00	115.00
NOTE: Prices vary and are either freight collect or freight equalized depending on producer and location.			
Hydrocortisone acetate, micronized, dms., 25 kilos or more. gram.	.70	-	
Hydrocortisone, alcohol, micronized, dms., 25 kilos or more. gram.	.70	-	
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)			
Hydrofluoric acid, aqueous, 7.0% tanks, f.o.b. f.t. equaled	100/lbs.	43.00	-
Hydrofluorosilicic acid, 15-gal dms., t.l. works, 30% basis	ton	151.00	-
tanks, 100% basis, works	ton	100.00	140.00
Hydrogen bromide, anhyd. cyl. extra, 30,000-lbs. l.c.b. works	lb.	7.00	-
Hydrogen chloride, anhyd. 50-lb. cyle., c.l. works	lb.	.85	-
600-lb. cyls. c.l. same basis	lb.	.82	-
Hydrogen chloride, anhyd., tube trailers, seller's trailer, min. 100,000lbs. a year	lb.	.37	-
Tube trailers, buyer's trailer	lb.	.27	-
Hydrogen chloride anhyd., tenke, works	ton	270.00	-
Hydrogen cyanide, liq. 89.5%, tenke, works	lb.	.50	-
Hydrogen fluoride, anhyd., tank cars c.l. t.o.b. f.t. equaled	lb.	.6875	-
Hydrogen peroxide, 35% tech., tanks, works, ft. equaled	lb.	.2325	-
60% tankcars, f.t. equaled	lb.	.3225	-
70%, tankcars f.t. equaled	lb.	.45	-
Hydrogen sulfide, liq. 99.25% min. seller's tanks, works	lb.	.12	.13
170 lb. cylinders	lb.	2.27	-
Hydroquinone, photo grade, consum- ers, c.l. t.l. divd.	lb.	2.54	-
tech. dms. c.l. divd.	lb.	1.95	-

Hydroxyacetico acid, tech., 70%, tanks, Belle, W. Va.	lb.	.46½	-
Hydroxylaminium sulfate, dms., t.i. f.o.b.	lb.	.83	-
p-Hydroxybenzoic sulfonic acid (see p-Phenoxybenzoic acid).			
Hydroxybutyl methylcellulose (visc. 12,000 cps.) 50 lb. bags, t.i. cl. 30,000 lb. min., divd., zone 1	lb.	2.10	-
Hydroxycitronellal dimethyl acetal, dms.	lb.	16.55	-
p-Hydroxydiphenylamine, dms., t.i., f.o.b. works	lb.	4.10	-
Hydroxycitronellal, natural, dms.	lb.	9.40	-
pure, dms.	lb.	13.80	-
extra grade, dms.	lb.	14.80	-
syn., dms.	lb.	9.50	-
Hydroxyethyl cellulose, t.i., divd.	lb.	2.07	2.12
Hydroxyethyl methylcellulose (visc. 5,000 through 45,000 cps.) 50 lb. bags, t.i. cl., 30,000 lb. min., divd., zone 1	lb.	2.73	-
Hydroxypropyl methylcellulose, pre- mium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags, t.i., cl., 30,000 lb. min., divd., zone 1	lb.	2.87	-
Hydroxypropyl methylcellulose, U.S.P. (visc. 50 through 100 cps) 50 lb. bags, t.i., cl., 30,000 lb. min., divd., zone 1	lb.	2.99	-
Hydroxypropyl methylcellulose (visc. 4,000 through 15,000 cps) 50 lb. bags, t.i., cl., 30,000 lb. in., divd., zone 1	lb.	2.17	-
Hydroxypropyl methylcellulose (visc. 50 through 100 cps) 50 lb. bags, t.i., cl., 30,000 lb. min., divd., zone 1	lb.	2.64	-
6-Hydroxyquinoline (see Quinoline)			
Hypophosphorous acid, pur., 60% dms., cl., works	lb.	3.15	-

Ichthammol, NF, 200-kilo drums.....	lb.	4.25	4.50
S/minodiacetic acid, 95% min., drums,			
o.l., t.l., works.....	lb.	3.00	-
Indole, drums.....	lb.	25.50	-
Insecticid. Eng. kilo. drums, 1000 kilos or			

Indigo, 10-kilo bags.	17.50	22.00
more, 10-kg. works.	13.50	18.00
Iodine, crude, dms.	14.21	14.58
Iodina USP.		
Iodochlorhydroxyquin, USP, XVI-50-		
kilo dms., 100-468 kilos, Irr.		
blkd.	35.00	45.00
Iodoform, NF, dms., 300-lbs., f.o.b.		
works.	24.00	-
a-Ionone, dms.	16.20	-
b-Ionone, dms.	13.10	-
Ipecac root, whole, bgs.	25.00	-
Irish moss, bleached, prime,		
whole.	.55	.60
Iron blue, alkali-resistant, bgs., i.c.l.		
ionolite, div. E.	2.70	-
Iron blue, 100-kg. bag, i.c.l. Iron blue		

perf., powd., palls, 10-100-lb. lots.....	1.00	-	Lake C, red toner, (red 30, 31, 32, ell.	lb.	6.70	-	more	lb.	23.50
oxide, black, syn., bgs, c.l. irr. equival.....	.66½	.75½	Lanolin, anhyd., cosmetic, 400-lb. dms. works....	lb.	1.18	1.25	Lithium hydroxide, monohydrate, dms., c.l., t.i., divd.	lb.	1.93
oxide, brown, syn., bgs, c.l. irr. equival.....	.68	.78½	pharmaceutical, 400-lb. dms. works....	lb.	1.15	-	Lithium hypochlorite, c.l., t.i., works Lithium metal, 1,000-lb. lots or more, divd.	lb.	1.07
oxide, metallic brown, l.c.l., bgs, Irr. equival.....	.13	.16	tech., (under 2% l.i.e.), 400-lb. dms. works....	lb.	1.08	113	Lithium nitrate, tech., dms., 100-lb. lots.....	lb.	22.70
oxide, nat., red, dom, pure, bgs, c.l. works.....	.275	.40	Lard (See Oils, Fats & Waxees market report.)				Lithium acetate, bgs, c.l., ht. ellid.	lb.	3.25
oxide, yellow, ....	.18	-	Lard oil, No. 1, dms., c.l., l.o.b.	lb.	.34		Lithium sulfate, anhydrous, t.i. divd.	lb.	1.01
syn. bgs, c.l. Irr. equival. lb.	.63	.71	tanks, same basis.....	lb.	.20		Lithium rod toner, barium, dms., irr. nld.	lb.	3.03
oxide, buff, nat, dom, bgs, c.l. l.i. works, light.....	.75	.80	Lard oil, extra, winter-strained, dms. c.l.	lb.	.41	-	calcium, dms., same basis.	lb.	3.27
dark.....	.80	-	tanks, same basis.....	lb.	.33		Lithol turbine toner (rad 57), resinated, dms., Irr. alk.	lb.	3.50
other shades, bgs, c.l., irr. equival.....	.50	.55	prime, burning, dms., c.l., sema be- sis, Chicago.	lb.	.43	-	Locust bean gum, powd., bgs.	lb.	5.80
white, bgs, l.c.l. works.....	1.40	-	prime, burning, tanks, same be- sis.	lb.	.35	-	2,4-Lutidine, dms., t.i., irr equval kilo	lb.	6.00
			NOTE: 300MI. rad 1½c. higher, except Texas, 2c. and West				Lycopodium, 50-dms.	lb.	5.76
							Luzine, monobromochloride, lead	lb.	6.00

			Cost, 3c. higher.			
amyl amynoide, dms., f.o.b. works	1.44	1.48	Laurel leaves, Turkish.....	lb.	1.95	2.00
amyl alcohol, 95% tanks, f.o.b. alld.	7.25	-	Laurent's acid, drums, l.o.b.	lb.	3.85	-
bornol, 100lb. dms.	.80	1.16	Lauric acid, comt., pure bgs., c.l.	lb.	.55	.71
bornyl acetate, dms.			Lauri aldehyde (aldehyde C-12).	lb.	7.75	-
butyl acetate, solvent grade, tanks, fri. alld.	.45	.48	dms.	lb.		
butyl acrylate, tanks, fri. alld. E. f.b.	.71	-	n-Lauryl methacrylate, dms., c.l., t.i., works.	lb.	1.72	-
butyl alcohol, tanks, divd.	.29	-	Lavandin oil, <i>Atrialis</i> , 30-32%, dms. lb.	lb.	4.00	-
butylene, 99%, tanks, f.o.b. works	.32	-	Lavender flowers, ord.	lb.	.55	.75
butyl lauroylate, tanks, l.o.b. works	.42½	-	medium, bls.	lb.	.80	.90
butyl methacrylate, tanks, divd. lb.	.87	-	Select bls.	lb.	1.10	1.19
butylphenylacetate, dms.	3.10	6.60	Lavender flower oil, NF, French, 40-42%, ester, cns.	lb.	9.25	13.50
butylsulfonate, dms.	3.45	-	spike, Spanish, dms.	kilo	16.00	22.00
butyraldehyde, tech., dms., o.l., divd.	.43	-	Lead acetate, purif., flake, 400-lb. dms., works.	lb.	.46	-
tanks, divd.	.35	-	tech., flake, l.i., 400lb. dms., works.	lb.	.37	-
butyric acid, dms., o.l., l.i., divd. lb.	No Prices		Lead blue, basic, sulfate, blbs., c.l., ship,l. pt., l.o.b.	lb.	.87	-
tanks, same basis.	.75	-	Lead carbonate (see Lead white basic carbonate).			
butyronitrile, dms., c.l., l.o.b. works fri. collect.	.84	-	Lead chloride, 400-lb. dms., works. lb.	3.25	-	
tanks, same basis	.75	-	Lead dioxide, tech., powd., 200-lb. dms., t.i., works.	lb.	.66	.70
eugenol, dms.	5.20	6.60	Lead fluorobate, liq. conc., dms., t.i., works, fri. equilid.	lb.	.86	-
hexad, powd.	12.00	-	Lead metal, divd.	lb.	.18	.18½
nicotinic acid, hydrazine (see Isoniazid).			Lead monocellitate, milled, bgs., c.l., l.o.b. works.	lb.	.56½	-
nonyl alcohol, dms., l.i. ....	.48	-	coarse, bgs., c.l., same basis	lb.	.57½	-
octyl alcohol, tanks, divd.	.44	-	Lead naphthenate liq., 24% Pb. dms., fri. alld.	lb.	.93	-
ophrone, tanks divd.	.61	-	Lead nitrate tech., cryst., 400-lb. dms., l.i., works.	lb.	.32½	-
ophthialic add., 99%, bulk, f.o.b., Joliet, Ill., min. fri. alld.	.46	-	Lead peroxide (see Lead dioxide).			
ophthosulfonite, bgs., t.i., works. lb.	2.85	-	Leadred, 95% Pb ₃ O ₄ or less, bgs. c.l., works.	lb.	.37	-
propyl acetate, tanks, divd.	.47	-	Lead red, 97% Pb ₃ O ₄ , bgs. c.l., works.	lb.	.37½	-
propyl alcohol, anhyd., 99%, tanks, divd.	1.38	-	Lead red, 98% Pb ₃ O ₄ , bgs. c.l., same basis.	lb.	.37½	.40½
refid., 95%, tanks, divd.	1.31	-	Lead silicate (see Lead, white, basic silicate).			
refid., 91%, tanks, divd.	1.26	-	Lead silicochromate, bgs. c.l., works.	lb.	.35	-
propyl ether, tanks, divd.	.44	-	Lead sulfate (see Lead, blue, basic sulfate and Lead, white,			
crude, tanks, divd.	.37	-				
propylamine. (see Mono-, Di- or Tri-).						
propyl myristate, dms., t.i., E.	1.19	1.50				
seconic acid, refid. bgs. t.i.	1.45	1.48				

K			
acid, paste, dms., works, 100% ba-	sic.	kilo	4.75
span wax, ca.		lb.	5.60
joba oil, 65-gal. dms., f.o.b. Arizona			
producing point	gal.	65.00	60.00
juniper berry oil, Italian		kilo	47.00
<hr/>		<hr/>	
Keanin, water washed, fully calcined,			
beads c.t., f.o.b. Georgia.. .ton	255.00	-	
NF pwd., colloidal, bacteria con-			
trolled, 50 lb. bags, 5,000 lb.			
lots	.24	-	
Keanin, uncalcined, No. 1 coating, bulk,			
o.l., f.o.b., Georgia.....ton	64.00	-	
No. 2 coating	ton	75.00	-
No. 3 coating	ton	73.00	-
No. 4 coating	ton	70.00	-
filler, gen.l purposes, same be-			
ads.	ton	68.00	-
delaminated water washed, uncal-			
cined paint grade 1 micron			
avg., same basis.....ton	162.00	-	
dry-grd. airflocked soft, same ba-			
sis.	ton	80.00	-
Kareya gum, No. 1, powd., bbls.	lb.	2.25	-
No. 2, powd., bbls.	lb.	1.95	-
<hr/>		<hr/>	
Lead, basic (see Lead, basic, basic sulfate and basic, white, basic)			
Lead, white, basic carbonate, bgs., c.t.,			
fri. std.....lb.	.82	-	
Lead, white, basic, citrate, bgs., c.t.,			
same basis.....lb.	.67	-	
Lead, white, basic sulfite, bgs., c.t.,			
same basis.....lb.	.65	-	
Lecithin, edible, tech., bleached, non-			
ret., dms., i.c.i., works.....lb.	.36	-	
unbleached non-ret., dms., i.c.i.,			
same basis.....lb.	.34	-	
edible, tech., bleached, non-ret.,			
dms., f.i., works.....lb.	.26	-	
unbleached, non-ret., dms., f.i.,			
same basis.....lb.	.28	-	
Lemon oil, Argentina	kilo	14.00	-
Brazil	lb.	6.50	7.00
Cell., USP, dms.	lb.	9.00	9.35
Italian	lb.	12.50	-
Lentongrass oil, Indian, dms.	kilo	11.25	-
Guatemalan, dms.	lb.	2.25	-
di-Leucine, dms., 1 kilo works.	kilo	60.00	60.00
Licorice root, whole, ble.			
gran. bls.	lb.	.40	.50
powd., bls.	lb.	.70	.00
Ugnosulfonate (see under Ammonium) or Sodium lignin sul-			
fonate).			
Lime, chemical, pebble (quicklime),			
bulk, 50,000 lbs., works, f.o.b.			
plants	ton	39.00	45.00
Lime, chemical, hydrated, bulk, same			
beads	ton	46.00	50.00
bgs., same basis	ton	54.00	57.00
Lime, NF, purif., 100-lb. dms.	lb.	.69	-
Lime oil, dia., Mexican, dms.	lb.	6.00	-
Haitian, diet., dms.	lb.	8.00	-
expressed, dms.	lb.	17.50	-
Lime salts (see Calcium).			
d-Limonene, .....kilo	.70	.85	
Linool ex bols de rose oil, dms.	lb.	6.35	-
syn., 98-100% dms., f.o.b. works.	lb.	2.93	-
Linool oxide, syn., 55-gal. dm.	lb.	7.76	-
Linalyl acetate ex bols de rose oil, 90-			
concentrate	lb.	12.00	11.77
10,000-lb. lots or more. f.o.b.			
Freepart, Tox	lb.		
diecasting effoys	lb.		
Magnesium nitroso, tech., flsca. 250-	lb.		
lb. dms., f.i. works	lb.		
Magnesium oxide, USP, light, bgs., c.t.			
works, f.i., quickld	lb.		
heavy, dms., c.t., same basis	lb.		
Magnesium oxide, leach (see Magnesia).			
Magnesium phosphate, trisbasic, tech.			
60-lb. bgs., f.o.b.	lb.		
Magnesium silicate (see Talc).			
Magnesium silicofluoride, bgs., c.t., t.i.			
works	lb.		
Magnesium silanate, bulk, t.i.	lb.		
Magnesium sulfite 10% Mg (spasm			
salts), tech. bgs., f.i.,			
works	lb.		
bulk, same basis	lb.		
USP, cryst., bgs., emic basis ..	lb.		
USP, cryst., bulk, same basis ..	lb.		
Magnesium sulfilate, 17% Mg, (syn-			
thioetic monohydrato), tech.			
Igs., f.i., works	lbs.		
C ⁴ , same basis	lbs.		
Magnesium sulfate, anhydrous, CP			
bgs., f.i., works	lbs.		
Magnesium sulfate trihydrate, tech.			
bgs., f.i., works	lbs.		
Magnesium trisilicate, USP, powd., fb.			
dms., 6,000-lb. lots	lb.		
UBP, micronized powd., dms.,			
375-lb. lots	lb.		
Malethion, tech., dms., f.i., works.	lb.		
Maleic acid, cryst., powd., drums, 100			
kilos, f.o.b.	kilos		
drums, tone, f.o.b.	kilos		
Maleic anhydride, bgs., f.i., works, f.i.			
equival.. .	lb.		
tanks, works, fri. equiv.. .	lb.		
Maleic acid, purif., and food grades. 50-			
lb. bgs., f.i., c.t., divd.	lb.		
Mandarin oil (see Tangierine oil, Italian).			
Mandelic acid, dms., 1,000 kilo.			

Kolanuts, bgs.....	lb.	49½	.51	52½ cins.	lb.	18.00	21.00	Manganese acid, chro., 10% lots.
				syn. 88-100%, dms., i.o.b. works.	lb.	3.10	-	Manganese acetate, hydrate, dms., divd.
Linalylbenzoate, syn., 55-gal. dms.	lb.			Linalylbenzoate, syn., 55-gal. dms.	lb.	8.00	-	lerehydrate, dms., t.i., divd.
Linalyl cinnamate, syn., 55-gal. dms.	lb.			Linalyl formate, syn., 55-gal. dms., lb.	lb.	59.65	-	Manganese borate printing ink drier, t.i.
Linalyl lauroylsuccin, syn., 55-gal. dms.	lb.			Linalyl lauroylsuccin, syn., 55-gal. dms.	lb.	7.75	6.50	Manganese borate, tech., dms., t.i.
Lindane, 20% formulation, dms., divd.	lb.			Lindane, 20% formulation, dms., divd.	lb.	5.60	6.55	Manganese carbonate, chemico grade, 46% Mn. bgs., 20,000-lb. lots or more, works.
Lindyl propionate, syn., 55-gal. dms.	lb.			Lindyl propionate, syn., 55-gal. dms.	lb.	8.50	-	Manganese chloride, anhyd., dms., 20,000-lb. lots or more.
Linden flowers, with leaves, bls., without leaves, bls.	lb.			Linden flowers, with leaves, bls., without leaves, bls.	lb.	.76	.85	Manganese dioxide, nat., African grd., 74%-78% MnO ₂ , 100-lb. bgs., 1,000-lb. lots or more, works.
Linseed meal (see Oils, Fats & Waxes market report).	lb.			Linseed oil (see Oils, Fats & Waxes market report).	lb.	.60	1.15	84% MnO ₂ , same basis.
Linseed oil fatty acid, dist., dms., tanks.	lb.			Linseed oil fatty acid, dist., dms., tanks.	lb.	.50	.87	Manganese dioxide, syn., cryst., battery grade, 90%-92% MnO ₂ , 100-lb. bgs., t.i. works.
Litharge, com'l., powd., bgs., o.l. works.	lb.			Litharge, com'l., powd., bgs., o.l. works.	lb.	.63	.62	chemical, ferrite grade, same basis.
Lithium bromide, anhyd., dms., ton.	lb.			Lithium bromide, anhyd., dms., ton.	lb.	.88½	.60	Manganese gluconate, FCC grade, 100-lb. dms., i.o.b. works.
lots, divd.				lots, divd.	lb.	8.27	-	Manganese hydrate dms., divd.
soh, same basis				soh, same basis	lb.	4.00	-	Manganese hypophosphate, NF, dms., divd.
Lactose, edible, reg., bgs., o.l. works.	lb.	22	.25	Lithium carbonate, powd., bgs., o.l. divd.	lb.	1.80	-	Manganese metal, electrolytic, No. 1, chlo. bath, o.l. works.
Lactose, USP, reg., dms., 14-lb. lot, aquad.	lb.	54	.89	Lithium chloride, anhyd., o.l. divd.	lb.	5.32	-	chlo. bath, o.l. works.
Lactose, USP, spray dried, bgs., 11-lb.				ton				5% Mn

Manganese carbonate, fused, 31½% Mn. dms, 97% add.	lb.	34½
precip. 64-7% Mn. dms.	lb.	.42
Manganese sulfate, fertilizer grade, run-of-mine, 75%-78% MnSO ₄ , 25 lb bags, 50-ton cars, div'd.		
E. of Miss.	ton	280.00
..... same basis ... ton		245.00
Methyl violet base, bisulphated, PTA, 100% same basis ... lb		4.70
4,4'-Methylene dianiline (p,p-di aminodiphenyl methane) crude dms 11.1, lb	lb	1.75
pure, 98% same basis ... lb		2.25
Methylenediphenylbenzoylbenzoate/seed phenyl 4,4'-diacetobenzoate		

8		Acetone, anhydrous, dry,	66	-
2	204	Solid, 60% activity, I.I. Ir. id.	.88	-
3	133	d-Methionine (see Racemethionine)		-
9		L-Dihydroxy-50% waterable powder, dextro, dms. lb. 2.05	-	-
12		Methyl acetate, non-ret. dms., c.l. id. E. lb. 9.40	-	-
15		Methyl acetate, hydroperoxided, non-ret. dms., I.C.L., same basis. lb. 10.00	-	-
14		Methyl acetoacetate, East. div'd. bulk. lb. 85	-	-
100		Methyl acetate, tank, div'd. lb. 00.50	-	-
1845	1.000	Methyl alcohol (see Methanol)	.55	-
95	1.36	Methyl amyl alcohol, tanks, div'd. lb. .5412	-	-
14		Methyl antranilate, tech., dms., lo. lb. 1.41	2.05	-
13		Methyl benzoate, dms. lb. .25	-	-
139		99.9%, per grade, dms., I.I. lb. 1.65	-	-
141		Methyl bromide, des., tanks, 140,000 cu. ft. lb. .5614	-	-
80		Methyl chloride, premium, USP (visco. 400 through 4,000 cps) 60 lb. bags, II. C. 30,000 lb., min. id. zone I. lb. 2.73	-	-
25		Methyl chlorides, premium USP (visco. 15 cps) 50 lb. bags, II. C. 30,000 lbs., std. zone I. lb. 2.85	-	-
76		Methyl cellulose, (visco. 400 through 4,000 cps) 50 lb. bags, II. C. 30,000 lbs., std. zone I. lb. 2.24	-	-
46		Methyl cellulose (visco. 15 to 25 cps) 50 lb. bags, II. C. 30,000 lbs., min. std. zone I. lb. 2.52	-	-
38		Methyl chloride, indust. bulk, tanks, lo. works. lb. .28	-	-
83		Methyl chloroform (see 1,1,1-Trichloroethane)	4.85	-
82		Methyl citranate, dms. lb. 8.00	-	-
20		Methyl citrate, dms. lb. .235	-	-
28		Methyl chloroform, tanks, div'd. E. lb. 3.05	3.80	-
55	29	Methyl formate, 25-50 cps. lb. .41	-	-
53		Methyl formate, pure, non-ret. dms. lb. .29	-	-
61	41	Methyl formic acid, works. lb. .31	-	-
20		Methyl formic ester, 55-57 cps. lb. 14.50	-	-
20		Methyl hexyl red, 100% pure, dms. lb. 7.00	-	-
8		Methyl hexyl red, 100% pure, dms. lb. 100.00	-	59.25
2		Methyl hexyl sulfoxide, bulk, I.I. lb. 1.69	-	-
3		Monoacetylacetamide, bulk, dms. lb. .90	-	-
9		Monoacetylbenzene, pure, 100% (Chloracetic acid, m.) lb. 42.25	-	-
12		Monoacetylbenzene, tanks, I.I. lb. -	-	-
15		Monomethanolamine, E. lb. .43	-	-
14		Monomethanolamine, 70%, aqueous tanks, I.I. prep'd. 100% basis. lb. .94	-	-
12		anhyd. tanks, same basis. lb. .82	-	-
5		Monosuccinoglycolic acid, dms., cl. I. lb. .76	-	-
14		Inuka, amino tripept. lb. .60	-	-
100		Monomethylacryloylamine, anhyd., dms., cl. I. I.I. prep'd. lb. .79	-	-
100		Inuka, amino basis. lb. .76	-	-
1845	1.000	Monomethylamine, Anhyd., tanks, contained tanks lit required. lb. .5412	-	-
95	1.36	25% soln., Inuka, I.I. add 100% basis. lb. .57	-	-
14		40 mil% soln., Inuka, I.I. required 100% basis. lb. .6312	-	-
13		Moroxidinium phosphate, dms. lb. 2.50	-	-
139		Ilo to max., I.I. add. lb. .65	-	-
141		HIO lb required, cl. I.I. lb. .65	-	-
80		Monothiobutanephosphate (see Thiobutolphosphates, mono)		-
25		Mother wine, Iraian, wpt., Thornton, I.I. lb. .65	-	-
76		Irish, I.I. lb. .51	-	-
46		mfld., dom. Calif., same basis. lb. .51	-	-
38		Morphine alkaloid, NF. 25 klets. kdo. 1018.00	-	-
38		Morphine sulphate, I.I.I.P. 25 klets. kdo. 880.00	-	-
38		Morphine, damp. cl. I.I. I.I. add. E. lb. 1.02	-	-
83		tanks, I.I. add. E. lb. .94	-	-
82		Mutistic anil (see Hydrochloric acid). lb. 6.00	-	7
20		Musk, ryn., erubritio, 26-lb. cans. lb. 10.75	-	-
28		Musk-syn., ketone, dms. lb. 3.80	-	-
55	29	Musk-syn., xylol, (mgs.). lb. 1.24	-	-
53		Mustard oil, syn. (see Allyl Isothiocyanate). lb. .26	-	-
61	41	Mustard seed, Brown No. 1. lb. .26	-	-
20		Canadian No. 1 Yellow. lb. .26	-	-
20		Oriental No. 1 bgs. lb. .26	-	-
8		Mystic oil (see Bay oil). lb. 1.50	-	-
2		Mystic acid, comb. pure, I.I. lb. 1.12	-	-
3		tanks. lb. -	-	-

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 19

Oleum (see Sulfuric acid, Iuming).		
Olibenum gum, tears, bgs.	lb.	2.10
Olive oil, edible, Spanish, dms.	gal.	6.00
Italian B-type	gal.	6.35
Olivine, crude, works.	ton	12.00
20 mesh, works	ton	16.00
100 mesh, works	ton	20.00
Opium, USP, grain, powd. 25-kilo lots	kilo	125.00
Orange oil, expressed, USP, Cal., dms., f.o.b. plant	lb.	1.20
expressed Valencia, dms.	lb.	1.00
Calif., dist., crns. f.o.b. plant	lb.	.40
Florida, dms.	lb.	.60
Brazilian	kilo	1.20
West Indian, bitter, NF X, crns., dms.	lb.	6.80
Orange peel, bitter, Haitian bks.	lb.	.38
Oregano, Greece, 30 M.	lb.	2.26
Turkey	lb.	2.25
Mexico	lb.	1.05
Origanum oil, Spanish, crns.	kilo	35.00
Orris root, Florentine, bks.	lb.	4.00
powd., bks., bxs.	lb.	4.80
Veronabls.	lb.	3.00
powd., bks., bxs.	lb.	4.60
Ourycur wax, refid., pure, bgs.	lb.	3.25
Oxalic acid, bgs., c.l. works	lb.	.44
b-Oxyxanthopholic acid dms. works, tech.	lb.	2.55
Oxyquinalidine base, pure, 1,000 lbs., frt. alld.	lb.	8.00
Oxyquinolines sulfates, 100 lbs., frt. alld.	lb.	4.00

Palladium metal, works.	Troy-oz.	150.00
Palm oil, (see Oils, Fats & Waxes Market Report)		
Palm oil acid, dbl-dist. dms.	lb.	.31½
tanks.	lb.	.30
a. d. dms.	lb.	.42
tanks.	lb.	.36
Palm kernel oil, bulk, o.l.i., U.S.		
ports	lb.	.10
Palmarosa oil, Indian dms.	kilo	38.00
Palmitic acid, 80%, tech, bags.	lb.	.53
tanks	lb.	.51
Papaverine hydrochloride, NF powd.		
Imp. bulk	kilo	56.00
Paprika, Hungarian, 100 AU bgs.	lb.	.80
Spanish, 110 AU bgs.	lb.	.80
Paraffin, fully-refined, 127-130 F, ASTM,		
tanks, refy		.28
130-135 F, ASTM, tanks, refy.		.33½
140-145 F, ASTM, tanks, refy.		.35
150-155 F, ASTM, tanks, refy.		.41½
slack wax, 5% oil, tank, refy.		.19
12% oil, tanks, refy.		.21
20% oil, tanks, refy.		.16
AMP temperature is an arbitrary 3F higher than ASTR		
Pancrealdehyde, 61%, flake, bgs.		
c.l., t.l., divd.	lb.	.29½
65% powd., bgs., c.l., t.l. divd. ab.		.39½
Pancrealdehyde, tech, 99%, 55-gal. dms.		
L.L., divd. E.	lb.	.76½
tanks, divd. E.	lb.	.58½
Parathion, ethyl, dms., fr. alid.	lb.	1.75
Parathion methyl (see Methyl parathion).		
Para tolue red, pbz.	lb.	3.75
chlorinated (red 4) kgs.	lb.	3.75
Patchouli oil, Indonesian, dms.	kilo	20.00
Peach kernel oil, USP (see Apricot kernel oil).		
Peanut meal (see Oils, Fats & Waxes market report).		
Peanut oil (see Oils, Fats & Waxes market report).		
Pectin dom., NF, citrus, powd., 100-		
kg lots, divd.	lb.	3.90
Pelargonium acid, nat., tanks, min. int.		
alid.	lb.	.70
syn. tanks, L.o.b. int. alid.	lb.	.70
Penicillin, potassium, non-stable, 200-		
billion-unit lots.	billion units	20.00
Penicillin, procaine, sterile 50- billion-		
unit lots, bulk.	billion units	38.00
Pennyroyal oil, dms.	lb.	6.90
Perchlorophenol, 60-lb. bgs.	L.L.	

<i>L</i> , l.o.b. Wichita, Kan.	lb.	.55
<i>Tri</i> erythritol, tech., bgs., c.i., l.o.b.	lb.	71
ft. std.	lb.	71
<i>Tri</i> erythritol, di- and tri-isomers (see Dipeoxyerythritol).		
<i>Tri</i> pmethylerythritol.		
<i>Entero</i> erythritol triacrylate, I.I. dims.		
l.o.b. works	lb.	1.80
entoberitol, dims., 100 lbs. or more	lb.	
ft. std.	lb.	7.00
entoberitol-sodium, dims., 100 lbs.	lb.	
or more, div'd.	lb.	14.00
ethylene tetraoxol, NF, dims., 200-lbs.	lb.	
iota	lb.	32.00
super, black, Brazilian, bgs.	lb.	1.98
Lamborg, bgs.	lb.	2.03
Melbior, bgs.	lb.	1.99
Tellcherry, bgs.	lb.	2.30
super, red Chinese Fujian rice bgs	lb.	.88
Hannam, bgs.	lb.	1.06
Ling, bgs.	lb.	.76
Malan, S-4, bgs.	lb.	.70
Malabar, duplexous, bgs.	lb.	.43
upper, white, Minton, bgs.	lb.	2.80
pepper mint leaves; Imp., dims.	lb.	2.85
peppermint oil, Madras	lb.	14.00
Moweez	lb.	15.00
Willamette	lb.	11.00
Yakima	lb.	8.00
all, dims. l.o.b. works	lb.	7.00
		9.00

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

1

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

chips	lb.	.57
cridoniu matouci, dms.	lb.	
mhd.	lb.	20.75
line, frt. elkt.	lb.	17.75
oil, dms., lt. oild.	lb.	21.75
st. dms., lrt. mhd.	lb.	17.75
water, lynn.	lb.	2.00
chloro sulfido, USP, 1,000-oz.	oz.	
dms., 2,000 oz. or more.	oz.	4.20
chloro hydrochlorido, NF, 1,000-oz.	oz.	
dms., 2,000 oz. or more.	oz.	2.45
c. sulfate, USP XVIII, 1,000-oz.	oz.	
dms., 2,000 oz. or more.	oz.	2.90
dms., 1.1, frt. equaid.	lb.	1.49
c. amno basic	lb.	1.43

1

tech., 304 molecular w.t.	lb.	2.12
methionine, USP.	50-250	
kilo	kilo	5.80
500 kilos	kilo	6.60
or more kilos	kilo	5.50
1d grade, 99% min. o.i. f.i.	lb.	1.07
seed oil, dms.	lb.	.580
officinalis serpentina root, powd. basis	lb.	22.00
dms.	kilo	
amine, No. 40 (see Camphine No. 40)		40
precipitate, (see Mercurio oxide, red.)		
alpha, USP, cryst. bots.	gram	
ethanol, tech. bgs. I.I. works	kg.	
div'd.	kg.	3.95
ethanol, USP, cryst. dms. 50 kilos	kilo	8.95
or more, works	kilo	9.80
wd. dms., same basis	kilo	
ethanol monooacetate, dms. 1,000	lb.	1.98
lbs. or more	lb.	
lamellarized toner, molybdate	lb.	9.25
PTMA, dms. works	lb.	
injected, PTMA, dms. 1,000	lb.	11.80
works	lb.	10.60
indol, 25-lb. can	lb.	14.25
in, cms.	lb.	4.45
carbroot, India, whole, bgs.	lb.	1.91
wd. bgs.	lb.	
llyavin, feed grade, 25-kilos	kg.	34.60
div'd.	kg.	29.00
llyavin, USP, 25 kilos, div'd.	kg.	
llyavin, phosphate-sodium, 25-	kg.	136.00
div'd.	kg.	

CHEMICAL PRICES

WEEK ENDING SEPTEMBER 5, 1986

Sorbitan monostearate, dms., c.i., t.i., 80,000 lb. min., f.o.b. works.	.76	-
Sorbitan tristearate, c.i., t.i., 30,000 lb. min., f.o.b. works.	.80	-
Sorbitol, USP, reg. 70% aqueous, dms., c.i., f.o.b. shipping point.	.35	-
tanks, f.o.b. shipping point, lb.	.30	-
gran. dms., c.i.t.i. works	.70	.74
powd., dms., c.i., t.i. works.	.68	.72
Soybean meal (See Oils, Fats & Waxes market report.)		
Soybean oil (See Oils, Fats & Waxes market report.)		
Soybean oil acidulated, soapstock, 85% acid, tanks, New York lb.	.14	.15
Soybean oil, acid, dol., dist., dms.	.48	.59
tanks	.43	.44
s.d., dms.	.47	.58
tanks	.38	.43
Spearmint leaves, Imp., bns.	2.50	2.70
Spearmint oil, Far West, native	14.00	15.00
Midwest, native	10.00	12.00
Far West, Scotch	15.00	15.50
Midwest, Scotch	14.50	15.25
Spruce oil, dms.	8.00	-
St. John's bread, edible, bns.	.29	.30
zStannic chloride, anhyd., dms., works.	lb.	N.A.
Stannic oxide, dms., works.	lb.	N.A.
Stannous chloride, anhyd., dms. wks. lb.	lb.	N.A.
Stannous fluoride, liq., conc., dms., t.i., works, frt. equal.	.25	-
Stannous oxide, dms., works.	lb.	N.A.
Stannous sulfate, dms., works.	lb.	N.A.
Stearic acid, double pressed, bulk	.28	.3
single-pressed, bulk	.28	.3
triply-pressed, bulk	.32	.4
Stramonium leaves, bgs.	.15	.1
Streptomycin sulfate, USP, bulk, kilo.	47.00	-
Stronitum carbonate, glass grd. bgs., t.i., works.	lb.	37 1/4
Stronitum nitrate, 50-15 bgs., c.i., works.	100 lbs.	61.50
Styrene monomer, 98.6% min., t.c., t.i., f.o.b. works	lb.	.21
Styrene-acrylonitrile resin, nat., bulk, f.o.b. plant	lb.	.77
cryst., bulk, same basis	lb.	.77
clear, same basis	lb.	.77
Styrol acetate, dms.	lb.	2.35
Succinic acid, purif., cryst., dms., t.i., fr. alid.	lb.	2.00
Succinic anhydride, dms., t.i., t.i., f.o.b. work.	lb.	1.71
Sucrose, raw, white, bgs., o.i., f.o.b. ref. E.	100 lbs.	33.10
Sucrose acetate, isobutyrate, 80% dms., t.i., divd.	lb.	1.16
tanks, divd.	lb.	1.10
100%, dms., t.i., divd.	lb.	1.18
Sucrose octa-acetate, denaturing grade, 100-lb. dms., f.o.b. works.	kilo	12.50
Sulfabenzamide, dms., 500 kilos, kilo.	39.50	-
Sulfabenzamide-sodium, dms., 500 kilos.	kilo	25.00
Sulfacetamide, USP, dms., 500 kilos.	kilo	20.00
Sulfadiazine, USP, dms., 500 kilos.	kilo	53.00
Sulfadiazine-sodium, USP, dms., 500 kilos.	kilo	40.70
Sulfamerazine, USP, microcrystals, dms., 500 kilos.	kilo	33.50
USP, powd., dms., 500 kilos.	kilo	32.00
Sulfamerazine-sodium, USP, powder, dms., 50 kilos.	kilo	13.00
Sulfamethazine, powder, dms., 500 kilos.	kilo	9.50
Sulfamic acid, cryst., bgs., o.i., t.i., works.	100 lbs.	38.00
Sulfamic acid, gran., dms., o.i., t.i., works.	lb.	.36
Sulfanilamide, NF, reg. 1,000-lb. dms., frt. equal.	lb.	2.00
Sulfuric acid, tech., bgs., t.i., f.o.b. works.	lb.	.57 1/2
Bullaquinoloxine, veterinary, grade, dms.	lb.	8.00
Sulfur, crude, bright, molten, don., f.o.b. vessels, Gulport	long-ton	160.00
f.o.b. La. refi.	long-ton	125.50
recovered, divd., Houston	long-ton	125.50
ex terminal, Rotterdam	long ton	135.00
f.o.b. tanks, Alberta, Canada, for US delivery	long-ton	102.00
dark, ex-Tampa, Fla.	long-ton	157.50
Sulfur, cruds, 99.6% min. purity, coml. flour, 50-lb. bags, c.i., mines basis	100 lbs.	13.50
lump, same basis	100 lbs.	13.60
Sulfur, refd., 99.6% min. purity, rolls 50-lb. bags, c.i., mines basis	100 lbs.	17.50
flour, light, 50-lb. bags, same basis	100 lbs.	20.00
Sulfur, sublimed, NF, 99.55% min. purity, 50-lb. bags, c.i., mines basis	100 lbs.	28.00
Sulfur, rubbermakers, 98.6% min. purity, coml. rep., 50-lb. bags, c.i., mines basis	100 lbs.	14.80
lime, 98% min. passing through 325 mesh, same basis	100 lbs.	18.10
Sulfur dichloride, dms., c.i., works, frt. equal.	lb.	.24
tanks, same basis	lb.	.17 1/2
Sulfur dioxide, liq., coml. multi-unit cars, dms., f.o.b. works	ton	275.00
tanks, works	ton	210.00
Sulfur monochloride, dms., c.i., works, frt. equal	lb.	22 1/2
tanks, same basis	lb.	16 1/4

UPE**UNIVERSAL PROCESS EQUIPMENT, INC.**

MAILING ADDRESS: BOX 338, ROOSEVELT, NEW JERSEY 08555

PLANT SITE: U.S. 130 SOUTH, ROBBINSVILLE, NEW JERSEY 08691 609-443-4545 TELEX 833021
WE WANT TO BUY YOUR SURPLUS USED EQUIPMENT/PROCESSES/PLANTS**OVER 15,000 PIECES OF PROCESS EQUIPMENT IN STOCK...CALL TODAY!****LATEST ADDITIONS**

HAST C • HAST C • HAST C •
 10,000 GAL. HAST VERT. MIX TANK 60 PSI
 4,000 GAL. HAST C REACTOR 125 FV/175
 NEW 1900 SQ. FT. HAST C HEAT EXCHANGER
 (2) Niagara mld. 36 H 190 SS Pressure LF Filters,
 190 sq. ft.
 (5) 440 cu. ft. SS rot. vac. dryers comp. w/dust
 collectors, condenser etc.
 (1) 4000 gal. G/L reactor 100FV/150PV
 (1) 6000 gal. SS reactor 70/175 pal. 1/2 pcp coil kt.

48"x 24" TOLHURST SS "BATCHAMATIC" CENTRIFUGE COMPLETE LATE MODEL STILL INSTALLED (6)

(2) 1200 TONS CARRIER CHILLER SYSTEM

2 LATE MODEL 6'x 6' RENNENBURG 304 SS ROTARY DRYERS COMPLETE & (3) 5'x25'

NASH VACUUM PUMP SYSTEM MDL CL 3001 AND MDL 9001 COMPLETE WITH MOTOR & ACCESSORIES

10,000 TON/YEAR MALEIC ANHYDRIDE PLANT

2 DRAIS 30 HP & (2) 75 HP SAND MILLS SS

12"x 30" & 24"x 38" SS S/B CENTRIFUGE

2 SS NIAGARA 42-310-22 VERT. LEAF FILTERS

CUMBERLAND PELLETIZERS 6' & 8' (7)

30 CU. FT. 316 SS DBL. CONE VAC. DRYER

36 SQ. FT. LUWA THIN FILM EVAPORATOR

8,500 GAL. INCONEL REACTOR, 60 PSI, AGIT.

2,000 GAL. 316SS REACTOR, 1000/100 pal

1,300 GAL. 316SS REACTOR, 150 FV/125 PSI

4000, 5000, 6000 GAL. AGITATED
REACTORS VERY ATTRACTIVE PRICES**CORN SYRUP/STARCH PLANT**

200,000 lbs/Hr @ 300 pal st. boller
 150,000 lbs/Hr @ 700 pal. st. boller
 50,000 lbs/Hr @ 250 pal. st. boller
 6'x30' CS rot. hot air dryer
 5'x30' CS rot. hot air dryer
 4'x31' 72 tube SS rot. dryar
 24,000 sq. ft. triple effect evap. TI tubes
 600 sq. ft. ILS. Autojet filter cellulose Ind (3)
 500 sq. ft. Hercules 316 ELC pr/litter (4)
 12'x15' Elenco belt CS rot. recr. litter (2)
 7'6"x16' Elenco 316 SS precoat filter (2)
 8'x10' Elenco 316 SS pre coat filter (2)
 500 cu. ft. 316 SS plate ht. exch.
 285 sq. ft. APV 316 SS plate ht. exch.
 Ducon SS wet scrubber 11500 cfm
 20,000 gal 316 SS V mix tank 13'x20'
 6,000 gal SS vart. mix tank 13'x8'
 7,000 gal 316 SS V cone bottom. tank 10'6"x9'6"
 6,500 gal 316 SS cone bottom. tank 12'7"x8'
 3000 gal SS V mix tank 9'6"x8'" (3)
 3000 gal 316 V vac. tank 15 pal/FV

PLUS MANY MORE ITEMS CALL FOR DETAILS

HEAT EXCHANGERS

SOFT	MATERIAL	SOFT	MATERIAL
14,615(UNUSED)	TITANIUM	1,600(UNUSED)	304SS/314SS
12,250(UNUSED)	CS/304LS (3)	1,198	316SS
8,134	304SS/304LS	1,024(UNUSED)	316SS
8,210	CS/304SS	682	TITANIUM
7,775(UNUSED)	304LS (9)	705(UNUSED)	CS/304SS
4,840(UNUSED)	304LS (9)	608	CS/304SS/204SS
3,600(UNUSED)	GRAPHITE	588(UNUSED)	CS/304SS (2)
3,488(UNUSED)	481(UNUSED)	481(UNUSED)	CS/304SS
2,721	304LS	482(UNUSED)	CS/304SS
2384	TITANIUM	300(UNUSED)	CS/304SS
2200(PLAQUE)	TITANIUM (2)	202(UNUSED)	CS/304SS
2,000	304/304SS	275	CS/304SS
1812	TITANIUM	316SS/316SS	SS/SS

VARIOUS GRADES OF STAINLESS STEEL AVAILABLE
UP TO 24,000 SQ.FT. MANY USED,
ALL MATERIALS & PRESSURES4 PASSAVANT MDL. 200
VAC-U-PRESS BELT FILTERS
250 SQ. FT.19,000 GAL. 316 SS
FERMENTATION SYSTEM**COMPLETE PLANT SITE FOR SALE**

Former Synthetic Gas Plant. 60 acres of land, 75,000 sq. ft. of building built in mid 70's. Complete with all improvements including rail and pipeline transmission. We will sell entire facility or individual pieces of equipment. Major pieces are:

(2) 7.2 million cu. ft. per day hydrogen plant
 (4) 150,000 LB/HR 620 psi Boiler complete with Demineralizer systems

(2) 2500 KVA Generators

Emergency Turbine Generator Solar Centaur 3700 HP complete

100's of Heat exchangers-CS and SS up to 15,000 sq. ft.

100's of Pumps and Compressors

100's of Tanks - both atmospheric and pressure

CALL FOR DETAILS!

CENTRIFUGES

BASKET

40"x30" Sharples 316 mld. T1600 (3)

40"x30" Tolhurst Heat. C Auto (3)

40"x24", 316SS, Automatic, w/plow

PUSHER TYPE

Bird-Escher Wysa, 316SS, Mdl. P500, 20', UNUSED

DeLaval, 25", 2-Stage, 316SS

DISC/BOWL

DeLaval, Mdl. BRPX-300, SS, vert., & Mdl. BA-00, SS

Westphalia 304 SS Mdl. SAMN-5036

DeLaval, 25", 2-Stage, 316SS

SOLID BOWLS

Sharples, Mdl. P1000, P3000, P5000, P8400, (2), PY 414 SS

Podbielniak Mdl. 6000 comp. w/controls

VACUUM DRYERS

325 cu. ft. Abbe, 304 SS dbl. cone

200 cu. ft. 316SS, 8'6"x11'6", rotary

164 cu. ft. Devine 304 SS dbl. cons

164 cu. ft. Peterson "Coniform," 316SS Dbl. cone

150 cu. ft. SS Twin Shell

150 cu. ft. SS, & 150 cu.ft. Nickel clad

125 cu. ft. SS & CS, 4'x14', 105/90/150 pal

125 & 83 cu. ft. Buffaloak SS Rotary

60 cu. ft. Peterson Ksly, SS dbl. cone

40, 30 & 20 cu. ft. Stokes SS rotary (4)

30 cu. ft. Pfaudler G/L dbl. cone vacuum

**WE RENT/LEASE
& SELL CHILLERS**

PLEASE CALL CHARLES MASON FOR FURTHER INFORMATION AT 609-443-4545

UPETO RECEIVE OUR FREE 300 PAGE ENCYCLOPEDIA OF CHEMICAL PROCESS EQUIPMENT
CALL OUR TOLL FREE NUMBER 800-CHEM-CAT (800-243-6228) IN N.J. - 609-443-4545WE WANT TO BUY YOUR
SURPLUS EQUIPMENT, PROCESS UNITS
AND COMPLETE PLANTS. WE HAVE
OUR OWN DISMANTLING CREWS

MUCH MORE !!!

**RIGGING/DISMANTLING
DEMOLITION/ASBESTOS REMOVAL**

WE ARE EXPERTS AT DISMANTLING,
REERCTION, RIGGING DEMOLITION
AND ASBESTOS REMOVAL WITH TER-
RIFIC REFERENCES BOTH NATIONALLY
AND INTERNATIONALLY

CALL US TODAY FOR A QUOTATION
ON YOUR CURRENT NEEDS OR ADD US
TO YOUR BIDDERS LIST FOR ANY FU-
TURE PROJECT (201) 390-9550

SAVE **IDM** **SAVE****BUY DIRECT FROM PLANT SITE AND SAVE****SAVE** **IDM** **SAVE****ATTRACTIVELY PRICED**

- 1 - Approx. 51 Sq. Ft., Pfaudler, W/pad Film Evapor. 316 SS wetted parts ASME Coded, jacket rated 100 pal w/internal vacuum. Complete w/flange mounted motor to Pfaudler TW drive w/mechanical seal, lubricator & integral heat exchanger.
- Call today for more details.

EQUIPMENT WANTED
GOOD, USED, CHEMICAL,
PHARMACEUTICAL & RELATED
EQUIPMENT - CENTRIFUGES,
DRYERS, FILTERS, REACTORS,
TANKS ETC.

WE WILL PURCHASE INDIVIDUAL
ITEMS OR COMPLETE
PLANTS.
CALL OUR OFFICE TODAY. TOP
DOLLARS PAID. NO DEAL TOO
BIG OR TOO SMALL.

GLASS...GLASS...GLASS
WE ARE GLASS SPECIALISTS WITH
A TREMENDOUS INVENTORY FEATURING
USED, UNUSED AND REG-
LISHED ITEMS. OUR SHOP PER-
SONNEL ARE FULLY TRAINED TO
HANDLE GLASS.

REACTORS

Glass Lined
4,000 Gal. Pfaudler, 100/90 pal, TW
1,000 Gal. Pfaudler, RA60 Series, 100&FV/90 pal, 4KW
1,000 Gal. Pfaudler, RA60 Series, 100&FV/90 pal, 40W
1,000 Gal. Pfaudler, RA60 Series, 100&FV/90 pal, 4TW
800 Gal. SS clad, 80/60 pal
750 gal. DeDietrich, Phila drive
500 Gal. Pfaudler, 100&FV/65 pal, BH
750 Gal. Pfaudler, 25 & FV/85 pal, 2 HP
750 Gal. Pfaudler, Body-UNENDED, 25 FV/100pal
*Partial Listing - Much More Inventory
Glass Lined Storage Tanks & Parts
Also Available.

Stainless Steel

4,000 Gal. 316SS, Atmos./60 pal, with coils
3,000 Gal. 347SS Blew Knox, 150/60 pal
2,500 Gal. 318L SS, 75/78 pal, 150 pal int. coils
2000 Gal. Nostra Autoclave, 318L
pal, FV int. coils
2,000 Gal. Duusborg, 316 SS, 15/38 &
FV int. 50 pal/kt.
1,750 Gal. 316SS Nolla, 1467/50 pal
1,500 Gal. 304SS, 10 HP Lightnin
1,000 Gal. 304SS, 25/80 pal
1,000 Gal. 316SS, 50/75 pal/kt
750 Gal. 316SS, 75/80 pal
500 Gal. 304SS, 50/60 pal
600 Gal. SS, 50 pal, 1.5 HP XP
500 Gal. 316SS, 55 & FV/55 pal
100 Gal. 316SS, 15/50 pal
100 Gal. 316ELC SS, 800/90 pal

★★★ SPECIAL OFFER ★★★
4-DRAIS SAND MILLS, TYPE PM-SO-
STS-DDA, MANUFACTURED 1984-85.
PRICED TO SELL • CALL FOR DETAILS

MIXERS

4.5 Gal. Kneader Master Cont. 88 w/kt.
8 Gal. AMK 304SS Jckd. Kneader Extruder
15 Gal. W.C. Rasedo Sigma Blade Dbl. arm
25 gal. Rasedo OBL Ann Sigma Blade Jkt. SS
construction 15-LP.
80 Gal. Hockmeyer Pony, SS contac, 7.5 HP
varispeed
100 Gal. 304SS Sigma Blade, Jkt. 40 HP
500 liter Walex Hi Intensity, SS contac parts
200 gal. W.C. Rasedo Sigma Blade Dbl. arm
200 gal. AMK Kneader 40 pal, trough Jkt.
600 Gal. S-W Rubber Cement, CS, 2-10 HP
Motors (2).
Unlisted 1000 Gal. Samtry 316SS EH.D. Motion
Change Can, 100/4FV/165 Psi, 125HP
Littleford Model FNM-6000, SS
Littleford Model FNM-8000, SS
Littleford Model FNM-2000, SS w/choppers
Littleford Model FNM-1000, SS w/choppers
Protek Recycle 3.5 Cu. Ft. Mdl. SS 55 SS Cont.
100 Gal. Hockmeyer High Speed Dispenser
10 HP Hockmeyer High Speed Dispenser
Welding Eng. Model 2FV123 Twin screw
Extruder, 88, Contact, 150 pal

PLUS LOTS - LOTS MORE

LICENSED ASBESTOS
REMOVAL
(201)390-9550
TELEX:642-863

RECENT PURCHASES

Propane Storage System

120,000 gal. Capacity Propane Storage System consisting of

2-60,000 Gal. Propane Tanks, Compresors, Pumps

400 gal. G/L Pfaudler Vert Re-clover, 55 Pal.

1750 gal. Reactor, 316 SS, 15 PSI

Int. 40 gal. JCKT.

St. Regis Bag Purifier, Model #715, 15 L.

MLT.

5000 Gal. 304 SS Jckd. Mix Tank

2" dia. x 3' Chromia Plated Flaker

MANY MORE ITEMS IN STOCK-CALL IDM TODAY!

INTERNATIONAL
IDM
Int'l. Dismantling & Machinery Corp.
P.O. BOX 380 SOUTH RIVER

AARON

EQUIPMENT COMPANY

DIVISION ARECO, INCORPORATED
735 EAST GREEN STREET
P.O. BOX 80
BENSENVILLE, IL 60106

(312) 350-2200

TX 28-9454 CABLE AARONFOO

QUALITY MERCHANDISE AT A COMPETITIVE PRICE "UNUSED" EQUIPMENT

ATTENTION WEST COAST BUYER
Unused 15' Gal. Vert. T304 SS Tanks 13'
Dia x 14' H, Dish Bottom, Flat Top 4'
CSO. Skirt Mounting, (4)

FILTER-ROTARY VAC.

15826-F5 Inc. 38" dia x 12', 55' stirring disc, 1/2 HP,
14777-E, hrs. 3" dia x 12', T316SS, bell pump, vac pump.
11177-Oliver S/S, #8" dia x 8".
11859-Oliver 1-K.S. flexible, 8" dia x 6", 316SS.
18431-K.S. flexible, 8" dia x 6", 316SS.
18392-Eimco belt filter, 8" x 10", steel drum, w/Neash pumpa.
18627-Amekit, 8" dia x 14" face, mesh belt, 5/8".
17838-Eimco, 31 1/2SS, 10" dia x 14", knife discharge.
17285-impeccable filter, 12" dia x 10", Nash vacuum.
20251-K.S. T304, vacuum filter, 12" dia x 14", 304SS.
20323-Dorr Oliver 1 1/2" x 16" vac. filter, 8/3 cont. parts.
11468-Emco 10" x 10" rotary vac. filter.

DRYER-ROTARY VAC.

18844-Schiffman Porcupine Processor/Polyester Chip
Crystallizer 30" dia x 18" long, T304 SS, 1/20 HP (8).

FILTER PRESSES

19846-Shriver P&F filter press, 12" x 12" alum. plates,
closed delivery, 23 chambers.

20534-Sperry Filter Press, 10", alum. plates, 357 sq.

15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet
closing.

15929-Shriver ALP, plate & frame, 18 3/8" x 38", 8/5 re-
cessed plates.

20787-Sperry filter press, 36", cast iron plates, closed deliv.

18482-independent filter press, 42" x 42", polypropylene,

4 eye closed, 34" open.

20550-Sperry filter press, 42" eye closed, 41 alum. plates.

CENT-BASKET VERT.

21408-Delaval 32" x 50", SS T316, 75HP.

15818-Delaval Mk II, vert., basket, 40" x 24", 316SS, 30

HP, hyd. drive.

19446-Shrader Sludge-Pak, SP-5500, 40" x 24" basket

centrifuge.

TANKS-S/S

20282-Unused Reactor, 600 gal., 304SS simple jacket.

10138-Feader, 500 gal., T-316 LBB, 86 PSI in/out/150 PSI.

20286-Brighton, 1000 gal., agit., 12" dia x 14" H.

20455-Tank, 900 gal., 12" dia x 14", flat bottom,

open top.

17043-Jos Cet horz. tank, 304SS, 18,000 gal., 10" dia x

22 1/2" long, 10' P/S.

DUST COLLECTORS

21125-Fabri-Jet 40,500 cfm, 42 sq. ft.

18398-Mikro dust collector, S/S, 63 sq. ft., mod. 54-100,

pulse jet.

21153-EVO, bin vent, 72 sq. ft., S/S, 8 HP.

20253-Unused EVO pulse jet collector, mod. 848FW009C, 90

sq. ft.

21192-JH Dey mfd. RJ-18RJS, 125 sq. ft., CS, 3 HP.

21222-Fabri-Jet, mod. SC10-181, 40 sq. ft.

20398-Pulse Jet collector, "FlexiKleen", mod. 58CT24 AV II

w/15' long, C/S.

21265-Mikro dust collector, 285 sq. ft., S/S.

20256-Unused EVO Corp. pulse jet dust collector, mod.

89FW030C, 350 sq. ft.

20255-Unused EVO Corp. dust collector, shaker type, mod.

MS016C10, 575 sq. ft.

SCREENS

21203-Sprout Waldron alter, D10, 6 decks.

21150-Sprout Waldron, D10, 1 HP, 10 decks, 8/3 cont.

21187-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21209-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21207-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21205-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21204-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21202-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21200-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21198-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21196-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21194-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21192-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21190-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21188-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21186-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21184-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21182-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21180-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21178-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21176-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21174-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21172-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21170-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21168-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21166-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21164-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21162-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21160-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21158-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21156-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21154-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21152-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21150-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21148-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21146-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21144-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21142-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21140-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21138-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21136-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21134-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21132-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21130-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21128-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21126-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21124-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21122-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21120-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21118-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21116-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21114-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21112-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21110-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21108-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21106-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21104-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21102-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21100-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21098-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21096-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21094-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21092-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21090-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21088-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21086-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21084-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21082-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21080-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21078-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21076-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21074-Sprout Waldron, D10, 2 HP, 10 decks, 8/3 cont.

21072-Sprout Waldron, D10, 2 HP

CMR MARKETPLACE

CHEMICAL MARKETING REPORTER'S CLASSIFIED ADVERTISING SECTION

COPY DEADLINE: Wednesday Noon preceding date of publication.
RATES/Classified Ads: \$57.75 for 36 words or less; \$9.75 for each additional six words or fraction. No display. First two words printed in bold face type.
Non-display advertisements payable in advance, except for contract customers (not subject to agency commission).

REPLIES: Send replies to classified ads with box numbers to CHEMICAL MARKETING REPORTER, 100 Church St., New York, NY 10007-2694.
INFORMATION: For further classified advertising information, call 212/732-9820.

BUSINESS OPPORTUNITIES

Small U.S. company seeks distributor worldwide to market specialty fatty chemicals to food and coatings industries. Write Box No. 723.

CHEMICALS OFFERED

Dimethyl Sulfide, Sodium Hydroxide, Sodium Silico Fluoride, Resins (PS, EP, ABS, SAN) available. Cresta Enterprises, Inc. Tel.: (415) 340-0168, TLX: 755983, Fax: (415) 574-1038.

CHEMICALS OFFERED/WANTED

Chem/Mart Corp. will buy all your surplus or off spec chemicals, plastics, pharmaceuticals and resins. Current bargain offerings: 224 lbs. Pentamethyl Tetraesterate; D-667 Resin; 40 dr. Ethnorite-T-30; 19M lbs. Kraton D4141; Calcium Acetate, U.S.P. and Galloc Acid. Prompt efficient nationwide service. Chem/Mart Corporation, 840 N. LaSalle St., Chicago, IL 60610, (312) 787-8099.

We can supply n-butyl alcohol, isobutyl alcohol, butyl acrylate, glycerin, chlorinated hydrocarbons, esters, ketones, aliphatics and aromatics, and styrene monomers. If you have any reasonable quantity of surplus chemicals call Ben Sager Chemicals International Inc., 312/448-8280, 540 Frontage Road, Northfield, IL 60093.

CHEMICALS WANTED

Active buyer of surplus chemicals, pigments, dyes, resins, waxes, plastics etc. Call toll free 1-800-631-3337 or 1-800-829-8738. Deer Polymer Corp. Chemical Div. 17 Industrial Drive, Holden, MA 01520.

All Surplus — Chemicals — Resins — Oils — Colors Solvents — Plastics — Specialties — Intermediates — bought by: Rembach Chemical Co., Inc. 52 Vassay Street, P.O. Box 5187, Newark, NJ 07105. Phone: (201) 589-7774.

Cash for your surplus chemicals, resins, colors, pharmaceuticals, dyes, other raw materials, by products, wastes, residues and off-spec materials. Morgan Chemicals Inc., 5600 Main Street, Williamsburg, NY 104221 (718) 832-4000; Telx 91133.

Realize Top Value from the sale of your surplus Chemicals. We buy surplus Chemicals, Plastics, Resins, Waxes, etc. Rembach Chemical Co., P.O. Box 484, Fair Lawn, NJ 07410. Phone: (201) 781-2448; Telex: 13-0454.

Resyn Corp. will buy your surplus chemicals, resins and resin raw materials — prime or off-specification. Resyn Corp., P.O. Box 1640 W. Blawie St., Linden, NJ 07036. (201) 892-8767.

We Buy Surplus chemicals, colors, resins, solvents, plasticizers by-products, etc. Over 50 years of service to industry. Eastern Color & Chemical Co., Inc. 85 Roosevelt Ave., Dept. C.P.O. Box 1028, Valley Stream, N.Y. 11582. (516) 791-4445.

EQUIPMENT OFFERED

Spray Dryer for Sale: 2 Nitro Spray Dryers, Model 120 complete with drives, centrifugal elevators, recording instruments. Bolt units excellent condition. Contact Ann Rilow, Kemir Industries, Box 70, Des Moines, Iowa 50301, 515/288-2111.

Tanks For Sale: Blue Glass & Epoxy Lined Tanks up to 37,000 gal. ea. from Milwaukee and Detroit. Sacrifice price! Free list: Brewery Works, Box 1457, Milwaukee, WI 53201-1457, (414) 272-1702.

30 Gallon and 65 Gallon Stainless Steel Drums. Call 312/373-0800 for information and prices.

FACILITIES OFFERED

R&D Facility Offered. Chemical Research and Development Facility—For Sale Immediate occupancy—40 miles east of Knoxville, TN in the Smokies—20,000 sq. ft. of offices, labs, pilot plant, and auxiliary buildings on 30 acres. Write or call: DEMO, P.O. Box 901, Madison, VA 23113. (804) 272-2885.

POSITIONS OFFERED

Chemical Sales Representative chemical distributor currently has high potential sales position available in northern NJ. Minimum 2-3 yrs. chemical sales experience with good customer following, familiarity with industrial and technical sales required. We offer competitive compensation—territorial opportunity. Send resume to Box CMR-721.

Marketing Reps/Executive/Manager needed by a chemical import & distributing company to develop various industrial chemicals, adhesives, monomers, etc. in Westcoast markets. Individual with minimum two successful years in the field. Related academic background, innovative and persistent personalities are necessary. Send resume to: 520 S. El Camino Real, Suite 600, San Mateo, CA 94402.

POSITIONS OFFERED

Exceptional individual with chem degree and minimum 5 years plastics sales/marketing experience to expand U.S. sales of resin from Houston office of leading foreign producer. References considered. Send resume/salary expectations to Box CMR-724.

SERVICES OFFERED

Custom Cleaning services. Intend. Vacuum Industries, Inc. has Wiped Film Evaporator capable of running dilutions at 0.05mm to temperature of 400°C. We welcome calls.

Custom solids packaging and distribution in the port of Mobile. Multi-wall bags, bulk bags, drums and bulk, Screening, repackaging and warehousing. Tel: (205) 433-2820, 540 Frontage Road, Northfield, IL 60093.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2820.

Customs Brokerage Services. Philip Hahn, SEAPAC, Bldg. 14A, Brooklyn Complex, Mobile, AL 36615, (205) 433-2

CHEMICAL PROFILE

PHOSPHORIC ACID

SEPTEMBER 8, 1988

SUPPLY

PRODUCER	CAPACITY*
Agrico, Donelsonville, La., South Pierce, Fla.	870
Archeden, Gelemer, La.	165
Bartow Chemical, Bartow, Fla.	414
Beker Industries, Taft, La.	525
CF Industries, Plant City, Fla.	675
Chevron, Rock Springs, Wyo.	200
Conserv, Nichols, Fla.	200
Fernlend, Green Bay, Fla.	255
Fort Meade Chemical, Fort Meade, Fla.	470
Freepoort, Uncle Sam, La.	600
Gerdiner, Tampe, Fla.	720
W.R. Grace, Bartow, Fla.	210
IMC, New Wales, Fla.	1,700
Mississippi Chemical, Pascoagoula, Miss.	225
Mobil, Pasedene, Tex., Depue, Ill.	365
Occidental, White Spring, Fla.	1,088
Royer, Mulberry, Fla.	208
J.R. Simplot, Pocatello, Idaho	350
Texasegulf, Lee Creek, N.C.	1,270
Total	10,888

*Thousands of short tons annually (P_2O_5 basis) of wet process phosphoric acid. Archeden acquired its facility from Allied in June 1984 leveraged buyout. Ameri idled its 175,000-ton, Pinay Point, Fla., facility in January 1985. The company is currently negotiating sale of the plant to FC8 Energy. Bartow Chemical and Fort Meade Chemical are joint ventures between US Divasities Group and W.R. Grace. Beker idled a 315,000-ton facility in Conde, Idaho, in March. The company expanded its Taft plant by 70,000 tons in 1985. Baker is currently in Chapter 11 status. CF Industries' 700,000-ton, Bartow, Fla., facility is idle indefinitely. Farmland recently restarted 255,000 tons of capacity and has additional 319,000 tons of capacity idle at its Green Bay site. Hydrite Chemical's 8,000-ton per year plant will be permanently closed in early 1987. Conserv, a subsidiary of Montesson's Agrimont, was acquired from Intercontinental Development Corporation this year. J.R. Simplot folded a 125,000-ton facility in Heber, Idaho, last year. The company improved its Pocatello facility by 220,000 tons as of January. Chevron closed its 69,000-ton Salt Lake City plant early this year and has recently opened the 200,000-ton Rock Springs, Wyo., unit. Texasegulf increased its capacity at Lee Creek by 250,000 tons in January of 1985. High-purity phosphoric acid, produced in a furnace process for primarily non-agricultural purposes is made by the following: FMC, Green River, Wyo.; Lewiston, Idaho; Newark, Calif., and Cartaret, N.J.; 405,000 short tons annually on a P_2O_5 basis; Monento, Kearny, N.J.; Augusta, Ga.; Long Beach, Calif.; St. Louis, Mo.; 316,000 short tons; Occidental, Columbia, Tenn.; Jeffersonville, Ind.; Dallas, Tex.; 121,000 short tons; Albright & Wilson, Charleston, S.C.; Fernlend, Ohio; 53,000 short tons. Profile last published 7/16/83; this revision, 9/8/88.

DEMAND

1985: 10.1 million short tons; 1986: 9.4 million short tons; 1980: 10.9 million short tons.

GROWTH

Historical (1978-1985): 3.5 percent per year; future: 1.5 percent per year through 1990 (includes a 7 percent downturn in 1986).

Continued on Page 22

PLATFORM

Managing Bhopal

Following are excerpts of remarks by Warren M. Anderson, chairman of Union Carbide Corporation, at the International Conference on Industrial Crisis Management at New York University, September 5, 1988.

The textbooks tell you to sit tight in a crisis until all the facts are in. The CEO, they suggest, should confine himself to strategizing, and send his emissaries to the scene. And no doubt that's a good approach in some situations.

But in our case, what I regarded as the controlling facts were already known when I left for India. A massive escape of toxic material had occurred at a plant owned by a company with Union Carbide in its name. The consequences of that toxic release were so devastating that something had to be done at once.

When confronting problems of any size and scope, business people are prone to marshal the skills and resources at their disposal and try to solve them. It's a reflex, and it's one I wouldn't change, whether the problem is across the road or around the world.

And if ever that approach was needed it was in Bhopal. It was essential to act, not to wait for emissaries to verify that what we saw on television and read in the newspapers actually happened. In this situation especially, with all the complications of distance, and the devastation felt by our Indian affiliate, someone had to be on the scene who could act without waiting for the usual approvals. In a major corporation that means the CEO.

What happened of course was that I was arrested and briefly detained. It's clear that the state authorities had another agenda. And it did not include a partnership with Union Carbide to try and ease the problems.

But if I had to do it over, God forbid, I would go again because the responsibility to be on the scene in that kind of calamity belongs to the CEO and no one else.

The rejection I met with also manifested itself in other ways — in the constraints on our investigating team, which was not allowed to talk to anyone in the plant, and in the harsh comments by the local press.

But these problems simply added to the other ones we faced. Let me touch on a few that I think any company must deal with in a crisis.

First of all, even when a crisis grabs the attention of the world, and demands the full attention of the CEO and the Board, it's essential to carry on the main business of the organization.

Carbide is a big store to mind. Our agricultural products business accounted for less than six percent of total 1983 sales of over \$9 billion. The actual production from Bhopal represented only a fraction of that six percent. But unless people focused on the other

94 percent, the whole machine could have ground to a halt.

To isolate the incident as best we could, I gave the job of running the business to others while I formed and led a crisis management team composed of a people from law, finance and public affairs.

That was done within hours after the news broke. We announced that Bhopal-related matters were for that team only, leaving everyone else free to concentrate on the business. It's not a perfect arrangement. The crisis was bound to be a powerful distraction no matter what we did, but we let people know that insofar as possible, it was business as usual at Union Carbide. Our people came through, and happily for us, so did our customers.

Another top priority was communication with the financial community. What they worried about was a management structure suddenly and massively diverted from its work of improving our financial performance to dealing with the crisis.

On top of that, the Johns Manville bankruptcy had left a strong impression on Wall Street. Although our own situation was in no way comparable to Manville's, we could not avoid the comparison.

Our own people were another key constituency for our crisis communication. Many could hardly believe that a Carbide facility was involved. The first thing they wanted to know was how they could help, where could they send money to aid the victims. A lot of people sent messages of support to me, and I can tell you they meant a lot.

Our people were also concerned. What does this mean for Carbide's future? What about their jobs? How about the retirement fund? And there was the very basic question: Who does this say about my employer and does it not include a partnership with Union Carbide?

But our most immediate concern was the victims in the City of Bhopal and what we needed to do help them. A close second was the need to calm the fears of our neighbors in the nearby plant towns, especially of our MIC manufacturing operation at Institute, West Virginia.

So within 12 hours after we learned about Bhopal:

We dispatched a medical and technical team to Bhopal to arrange for immediate and longer term relief for the victims, to investigate the incident, and to assist with the safe disposal of the remaining MIC supplies at the plant.

We shut down the MIC operation at Institute, and began converting supplies of MIC at other plants in Georgia, Florida, and Brazil to finished pesticides. And we recalled all MIC shipments in transit overseas.

And we also held our first press conference knowing that for many of the details the press wanted, we would have to say we just didn't know.

JOBS & PEOPLE

JOBS & PEOPLE

RTZ Chemicals Names Development Managers

RTZ Chemicals Ltd. has appointed Dr. Chris Sghibert and Dr. Allen Barnatt business development managers.

Dr. Sghibert's research and development responsibilities will focus on specialty monomers, organo-metallics and electronic chemicals.

Dr. Barnatt will focus on the application and development of existing technology, with emphasis on polymers.



A.P. Flan, who has been appointed vice-president and assistant general manager of National Oils & Chemical Corporation's USI Chemicals unit.

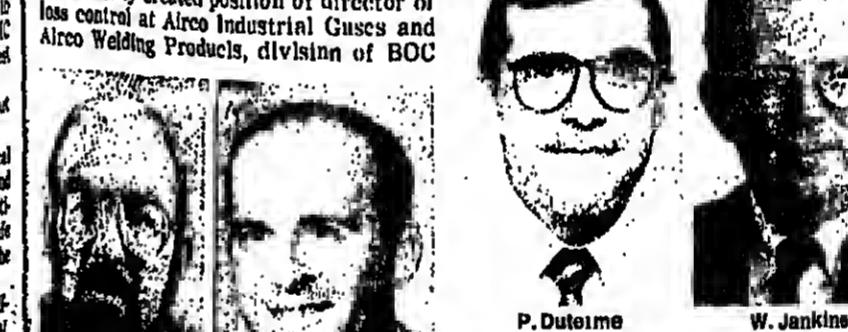


H. Grech Kaufman, who has been appointed vice-president of marketing and sales at Unicora Chemical, a chemicals distributor in Rolling Meadows, Ill.

NORMAN D. TOMIELLO has joined Diamond Crystal Salt Company as marketing manager for industrial products... PETER R. WARE has joined Syron Chemicals Inc. as technical representative... RAJ MEHTA has been named program leader, internally coated containers, in the surface-treated products department of Air Products & Chemicals Inc.

KATHERINE M. WILHARM has been appointed senior customer service manager for the Los Angeles area at Unocal Chemicals Division of Unocal Corporation... CHRISTOPHER L. JENKINS has been named vice-president of chemical trading at ICC Trading, a wholly-owned subsidiary of ICC Industries Inc.... STEPHEN M. TURNER has been appointed a product manager at Norton Company.

DR. BRYANT W. ROSSITER has been ap-



polypropylene sales manager for the Plastics Division of Phillips 66 Company... DON SCHULTZ has been appointed pricing and supply director for the Plastics Division and GARY SCHOOLER has been named export sales and supply director of the division.

P. Dutime

W. Jenkins

J. Scoppo

L. Blair

Southland Appoints Sales Representatives

Southland Corporation has named Larry Lefever and Larry Bergstrom chemical sales representatives.

Mr. Lefever previously held technical and sales positions with Sherwin Williams Chemicals and Viscosity Oil Company.

Mr. Bergstrom was formerly associated with Van Straaten, E.R. Houghton and Nalco Chemicals.



L. Lefever L. Bergstrom

pointed president of Viratek Inc. and vice-president of ICN Pharmaceuticals Inc.... NORMAN J. RUBASH has been named executive vice-president (international) at Amoco Production Company... DR. ROLAND GREENBERG has been appointed scientific director of licensing for E.R. Squibb & Sons Inc.

LEROY R. PEAK JR. has been named technical development manager for paper develop-



T. Armstrong J. Graham

ment at National Starch & Chemical Corporation, ALLEN BUCKLER has been appointed district sales supervisor for adhesives, and JEFFREY ATKINSON has been named director of market development in the company's Industrial Starch Division.

MEETINGS CALENDAR



SEPTEMBER 8, 1988

THIS WEEK

AMERICAN CHEMICAL SOCIETY, 192nd annual meeting, Anaheim Convention Center, Anaheim, Calif., September 7-12.

CHEMICAL MARKETING RESEARCH ASSOCIATION, world chemical congress, jointly with the chemical marketing and economics division of the American Chemical Society, "The Chemical Industry: Where In The World Is It Going?", Newporter Resort Hotel, Newport Beach, Calif., September 7-10.

COUNCIL FOR RESPONSIBLE NUTRITION, annual meeting, "Health Message: New Directions and New Opportunities," JW Marriott Hotel, Washington, D.C., September 7-10.

THIS MONTH

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 100th international meeting and exhibition, The Registry Hotel, Scottsdale, Ariz., September 15-18.

CANADIAN CHEMICAL PRODUCERS ASSOCIATION, international symposium on transportation emergency response, Vancouver, B.C., Canada, September 14-16.

AMERICAN MICROCHEMICAL SOCIETY, eastern analytical symposium, jointly with American Chemical So-

ciety and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.

CONFERENCE OF THE NON-WOVEN FABRIC INDUSTRY, eighth international conference and exhibition, Georgia World Congress Center, Atlanta, Ga., October 21-23.

CHEMICAL GROUP, NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT, Fall Conference, Marriott Pavilion Hotel, St. Louis, Mo., October 21-23.

COMMERCIAL DEVELOPMENT ASSOCIATION, impact of mergers and acquisitions on the future of technology-driven corporations, Hershey Hotel, Hershey, Pa., October 22-29.

EUROPEAN CHEMICAL MARKETING RESEARCH ASSOCIATION, 1988 conference, "The Chemical Industry Faces Its Future," Switell Bureau, Antwerp, Belgium, October 13-15.

EUROPEAN PETROCHEMICAL ASSOCIATION, annual meeting, Hotel Caro, Monaco, September 28-October 1; distribution meeting, October 19-October 22.

FIRE RETARDANT CHEMICALS ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Nassau Island, S.C., October 19-22.

SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 15.

OCTOBER

AMERICAN MICROCHEMICAL SOCIETY, eastern analy-

tical society and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.

ASSOCIATION OF THE PLASTICS INDUSTRY, plastic review and conference — South, jointly with the Georgia Plastic Engineers, Georgia World Congress Center, Atlanta, Ga., October 8-10.

CHEMICAL SPECIALISTS MANUFACTURERS ASSOCATION, seminar on aerosol technology, Pennsylvania C.H.e.s., Rosemont, Pa., October 27-28.

FERTILIZER ROUND TABLE, Sheraton Hotel, Fort Lauderdale, Fla., December 7-11.

FLORANCE MATERIALS ASSOCIATION,秋田県立農業研究センター, October 13-15.

UNITED STATES, 10th international congress on palm kernel oil, fragrance and flavor, China Science Hotel, Beijing, October 18-20.

K-16, 10th international trade fair for plastics, Duesseldorf, West Germany, November 1-13.

LATIN-AMERICAN PETROCHEMICAL ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Nassau Island, S.C., October 19-22.

SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 15.

LATER ON

CHIMICAL SPECIALISTS MANUFACTURERS ASSOCATION, seminar on aerosol technology, Pennsylvania C.H.e.s., Rosemont, Pa., October 27-28.

FERTILIZER ROUND TABLE, Sheraton Hotel, Fort Lauderdale, Fla., December 7-11.

FLORANCE MATERIALS ASSOCIATION,秋田県立農業研究センター, October 13-15.

UNITED STATES, 10th international congress on palm kernel oil, fragrance and flavor, China Science Hotel, Beijing, October 18-20.

K-16, 10th international trade fair for plastics, Duesseldorf, West Germany, November 1-13.

LATIN-AMERICAN PETROCHEMICAL ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Nassau Island, S.C., October 19-22.

SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 15.

AIR PRODUCTS & CHEMICALS INC. has introduced "Dabco" HE and SE high-performance urethane catalysts based on proprietary new chemistry for